SAMSUNG

# COLOR TELEVISION RECEIVER

Chassis : K16B(N)_Hitch
Model : CL21Z30MQLXXAO

# SERVICE Manual

## COLOR TELEVISION RECEIVER

CL-21Z30MQ

## FEATURES

- Turbo Plus
- DNIe jr.
- Low Stand-By Power Wattage
- SOUND Equalizer

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# 2. Product Specification

## 2-1 Product Features

| Block | Specfication | Core Parts | Remark |
|---|---|---|---|
| CRT | 21" SLIM FIT CRT | SLIM FIT CRT | |
| RF Part | LNA F/S TUNER | TDQ-6L/125S, LNA | |
| Power | WORLD WIDE INPUT VOLTAGE RANGE | STR-W6750F | |
| Video | - MULTI SYSTEM(NT/PAL/SECAM)<br>- 1H Comb Filter | TDA12025PQ/N1F80 | |
| Audio | - Output : 10W X2<br>- Function : NICAM/A2 STEREO,<br>- PSEUDO STEREO,<br>- TURBO PLUS | TDA12025PQ/N1F80<br>TDA7297SA | |
| Cabinet | - 21" CABINET | | |
| Other | - BASIC MODEL : CL-21Z30MQ<br>- UOC3 with a built-in MSP<br>- TURBO → TURBO PLUS | | |

■ Core Parts Functions

- TDA12025PQ : Video/Sound Processing¹ xMICOM
- STR-W6750F : SMPS Power STR
- TDA7297SA : 5W ~ 15W Sound Output BTL AMP
- 24C16 : 16K EEPROM
- LA78040 : Vertical Deflection AMP
- C5936 : H-OUT S/W TR
- TDQ-6L : F/S PAL Tuner(LNA Option)
- TDA6107JF : R/G/B Drive AMP IC
- Flyback Trans : FQH21A001(11P,27KV)

## 2-2 Key Features

| | |
|---|---|
| Model | CL-21Z30MQ |
| Voltage | AC 100~240V |
| Frequency of Operation | 50/60 Hz |
| Power Consumption | 100 Watts |
| Dimensions (mm/inches) | 640 x 399 x 470/<br>15.71 x 25.43 x 18.5 |
| Weight (Kg/ lbs) | 25.5Kg / 46.96 |

■ Hardware Configuration
- 1 Chip : UOC3 TDA12005PQ(CHROMA, IF+Deflection, MICOM, MSP)
- Tuner : TDA-6F/13F2S
- SOUND AMP : TDA7297SA(ZIP, 15P, -, DUAL, 32dB, PLASTIC, 20V, 30W)
- SMPS Controller : STR-W6750F(6P, TO-3P-F7L)
- Vertical AMP : LA78040(TO220, 7P, 15V)
- Flyback Trans : FQH21A001(11P, 27KV)
- CRT : A51QDX993X(A) (AK, 1H Single Focus)

■ Software Configuration
- MCU : 80C51-controller core
- Data Capture for US Closed Caption
- 0.4883s machine cycle

■ Picture
- Enhance : DNIe Jr.(Digital Natural Image Engine)
- System : NTSC3.58
- Interlaced(60Hz)
- AKB(Auto Kinetic Bais)
- Comb Filter : 1H Comb Filter
- 4:3

■ Sound
- BTSC/SAP-STEREO
- Output : 5/10/15W X 2CH
- Auto Stereo, Sound Equalizer, Auto Mute, Auto Volume Limit, PSEUDO STEREO, TURBO PLUS

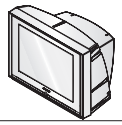
■ Feature
- Composite (RCA A/V, DVD), S-Video(Y/C)
- Picture Size : 4:3
- Auto Serch
- Sleep Timer : 180 Min
- Clock Setting
- Blue Screen, Melody On-Off, Picture Mode Select

■ In/Out Terminals
- Rear : 2RCA/DVD
- Front or Side A/V Input(Side A/V Preferability)

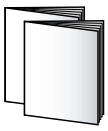
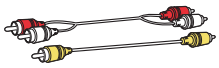
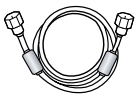
■ Remocon
- Universal Interface TM75

■ Power Consumption : 105W

# 2-3 Specifications Analysis

| Model | | CL-21M21PQ | CL-21Z30MQ |
|---|---|---|---|
| Chassis | | KS7A | K16B |
| Design | |  | |
| Picture | Screen Size | 21" | 21" |
| | Pure Flat CRT | ○ | ○ |
| | DNIe Jr. | ○ | ○ |
| | Comb Filter | 4H | 1H |
| | Velocity Modulation | × | × |
| | Video Noise Reduction | ○ | ○ |
| | Auto Kinetic Bias | ○ | ○ |
| | Color Tone Control | ○ | ○ |
| | Tilt Control | × | × |
| | Picture Mode | 4 Mode | 4 Mode |
| Sound | MTS/SAP | ○ | ○ |
| | Output Power(RMS) | 15W x 2 | 10Wx2 |
| | Tweeter | × | × |
| | BBE | × | × |
| | Surround | Surround | Surround |
| | Sound Mode | 5 Mode | 5 Mode |
| | Graphic Equalizer | × | ○ |
| | Sub-Woofer Speaker | × | × |
| | Auto Volume Leveler | ○ | ○ |
| | Melody On/Off | ○ | ○ |
| | Turbo Sound | ○ | ○ |
| Convenience | PIP | 1T (Optional) | × |
| | Plug & Play | ○ | ○ |
| | Zoom Mode | ○ | × |
| | OSD Demo | ○ | ○ |
| | OSD Language | E/F/S | E/F/S |
| | Previous Channel | ○ | ○ |
| | Closed Caption | ○ | ○ |
| | On/Off Timer | ○ | ○ |
| | Sleep Timer | ○ | ○ |
| | Auto Power Off | ○ | ○ |
| | Clock | ○ | ○ |
| | Channel Scan | × | × |
| | Self-diagnostic System | ○ | ○ |
| | Remote Control | TM76 | TM75 |
| | Remote Surf | ○ | ○ |
| | Channel Labelling | ○ | ○ |
| | Blue Screen | ○ | ○ |
| | Rack | × | × |
| Voltage | Voltage | AC100- | AC100-240V |
| | Stand-by | under 3W | under 5W |
| Jacks | RF Input | R1 | R1 |
| | A/V Input | S1/R2 | S1/R2 |
| | Monitor Output | R1 | R1 |
| | S-VHS Input | R1 | × |
| | Headphone | S1 | S1 |
| | DVD Input | ○ | ○ |
| | PC Input(VGA) | × | × |

## 2-4 Accessories

| Accessories | | Item | Item code | Remark |
|---|---|---|---|---|
| Supplied Accessories | | Remote Control<br>AAA Alkaline Battery (2) | AA59-00316D<br>4301-000121 | Samsung Service center |
| |  | User Manual | AA68-03751A | |
| | | Warranty Card | AA68-03727A | |
| Accessories that can be purchased additionally |  | Video Cable /<br>Audio Cable | - | Internal shopping mall |
| | | Antenna Cable | - | |
| | | Component Cable | - | |
| | | HDMI Cable | - | |
| |  | Antenna Cable | - | |
| | | HDMI/DVI Cable | - | |

# 3. Alignment & Adjustment

## 3-1 Service Instruction

1. General Adjustment :
   In general, a color TV can provide ideal visual quality by adjusting the basic settings such as the vertical size, horizontal size, focus, etc.
   Display a black and white picture on the screen to check if the picture is clearly displayed.
   If there are some 'spotted' points on the screen when displaying a black and white picture, degauss the screen using the degauss coil. If the spotted points remain, re-adjust the purity and the convergence.
   This completes the basic performance examination.

   ⚠ Notice.
   - ■ These adjustments and the check list are only applied to K16B chassis-applied models.
   - ■ Only use 230V for the measurement set. It is recommended using an insulation transformer when supplying power to the set so as to prevent shock to the set or to yourself.
   - ■ These adjustment specifications have been created on the basis of the domestic K16B chassis-applied remote control model. Some of the contents may be changed subject to the sales location and the product specifications.

※ When replacing the Module Service Instruction

1. When replacing the MAIN Board : Tilt adjustment, Focus adjustment, Screen voltage, W/B adjustment are all required. Since the settings including the Channel information, Deflection, etc. are saved to the EEPROM, recogfigure these settings when replacing the MAIN Board.
   The notation of the software information : T-HITNSA-1000 refer to "HITCH BASIC MODEL EUROPE.ver.1000"
   Since the settings including the Channel information, Deflection, etc. are saved to the EEPROM, recogfigure these settings when replacing the MAIN Board.

2. When replacing the CRT Ass'y : No adjustments required

3. When replacing the front panel Master Power switch : No adjustments required

4. When replacing the Side AV Ass'y : No adjustments required

5. When replacing the PIP Module : No adjustments required

6. When replacing the Control Ass'y : No adjustments required

7. When replacing the PFC Ass'y : No adjustments required

## 3-2 How to Access Service Mode

1. To enter Service Mode, press the keys on the remote control according to the following sequence. (in Stand-by status)

   Mute → 1 → 8 → 2 → Power On

   ※ When failing to enter Service Mode, repeat the procedure above.

2. The initial screen of Service Mode.

3. Functions of the Keys within Service Mode.

| | |
|---|---|
| MENU | Show all menus |
| ▲ / ▼ | Move the cursor to select an item. |
| ◀ / ▶ | Adjust the selected configuration value |

## 3-3 Factory Data

★ The underlined are items applied during the service adjustment. None of the others should be adjusted.

1. Option1

| No | Item | CL21Z30MQLXXAX | CL21Z30MQLXXAZ |
|---|---|---|---|
| 1 | System | CL | CP |
| 2 | Video Mute | 400msec | 400msec |
| 3 | AV Jack | 2RCA+DVD | 2RCA+DVD |
| 4 | Sound | Stereo | Stereo |
| 5 | Volume Curve | Large | Small |
| 6 | Initial Lang. | English | Portugal |
| 7 | Tilt | Off | Off |
| 8 | DNIe Jr | Off | Off |
| 9 | PIP | Off | Off |
| 10 | Auto Power On | Off | Off |
| 11 | Caption | On | On |
| 12 | Vchip | Off | Off |
| 13 | Child Look | Off | On |
| 14 | Plug Play | On | On |
| 15 | StandBy LED | Off | On |

2. Option2

| No | Item | CL21Z30MQLXXAX | CL21Z30MQLXXAZ |
|---|---|---|---|
| 1 | X-Ray Protect | Off | Off |
| 2 | High Deviation | Off | Off |
| 3 | V-Guard | On | On |
| 4 | ACS | Off | Off |
| 5 | CRT | 4:3 Zoom | 4:3 Zoom |
| 6 | LNA | Off | Off |
| 7 | Hotel Mode | Off | Off |
| 8 | Philippines | Off | Off |
| 9 | PIP Device | SDA9488 | SDA9488 |

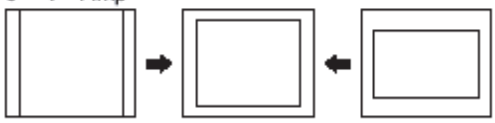
3. Deflection(NTSC 60Hz)

| No | Item | Var./Fixed | CL21Z30MQLXXAX | CL21Z30MQLXXAZ |
|---|---|---|---|---|
| 1 | V Amp | Var. | 35 | 35 |
| 2 | V Shift | Var. | 28 | 28 |
| 3 | H EW | Var. | 32 | 32 |
| 4 | H Shift | Var. | 32 | 32 |
| 5 | V Linearity | Var. | 36 | 36 |
| 6 | V S-Correction | Fixed | 30 | 30 |
| 7 | V Slope | Fixed | 30 | 30 |
| 8 | V Scroll | Fixed | 32 | 32 |
| 9 | V Zoom | Fixed | 48 | 48 |
| 10 | H Parabola | Var. | 32 | 32 |
| 11 | Upper Corner | Var. | 32 | 32 |
| 12 | Lower Corner | Var. | 32 | 32 |
| 13 | H Trapezium | Var. | 32 | 32 |
| 14 | Bow | Var. | 32 | 32 |
| 15 | Angle | Var. | 32 | 32 |

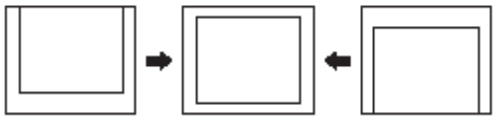
4. Deflection(PAL N 50Hz)

| No | Item | Var./Fixed | CL21Z30MQLXXAX | CL21Z30MQLXXAZ |
|---|---|---|---|---|
| 1 | V Amp | Var. | 0 | 0 |
| 2 | V Shift | Var. | -3 | -3 |
| 3 | H EW | Var. | 0 | 0 |
| 4 | H Shift | Var. | -6 | -6 |
| 5 | V Linearity | Fixed | 0 | 0 |
| 6 | V S-Correction | Fixed | 0 | 0 |
| 7 | V Slope | Fixed | 0 | 0 |
| 8 | V Scroll | Fixed | 0 | 0 |
| 9 | V Zoom | Fixed | 0 | 0 |
| 10 | H Parabola | Fixed | 0 | 0 |
| 11 | Upper Corner | Fixed | 0 | 0 |
| 12 | Lower Corner | Fixed | 0 | 0 |
| 13 | H Trapezium | Fixed | 0 | 0 |
| 14 | Bow | Fixed | 0 | 0 |
| 15 | Angle | Fixed | 0 | 0 |

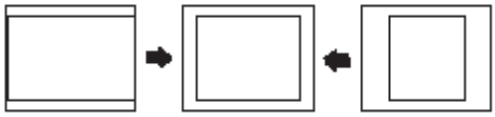
0 V - Amp



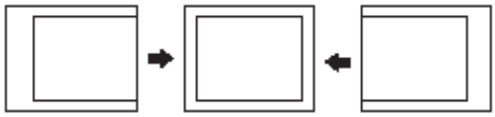
1 V-Shift



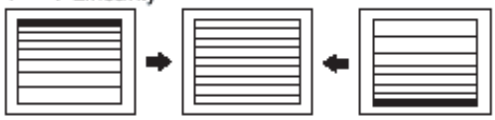
2 H-EW



3 H-Shift

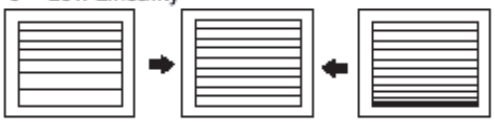


4 V-Linearity

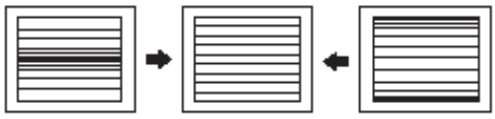


5 Upper Linearity

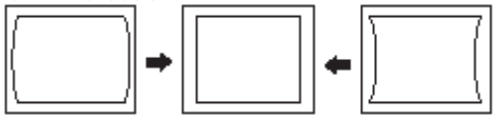
6 Low Linearity



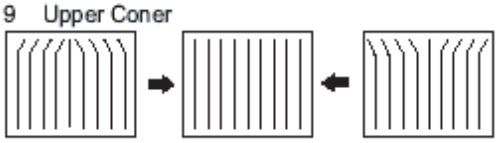
7 V SC



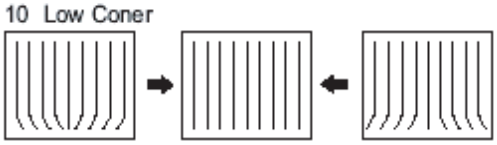
8 H-Parabola



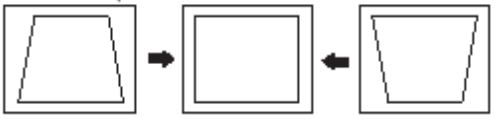
9 Upper Coner



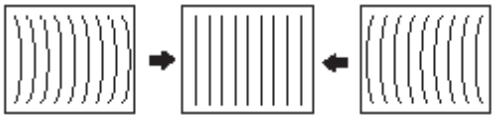
10 Low Coner



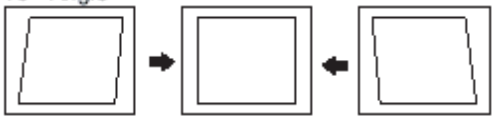
11 H- Trapezuim



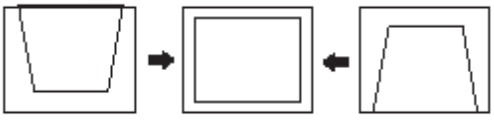
12 Bow



13 Angle



14 V Position



5. Video Adjust1

| No | Item | Var./Fixed | CL21Z30MQLXXAX | CL21Z30MQLXXAZ |
|---|---|---|---|---|
| 1 | R Cutoff | Var. | 23 | 23 |
| 2 | B Cutoff | Var. | 43 | 43 |
| 3 | R Drive | Var. | 44 | 44 |
| 4 | G Drive | Fixed | 32 | 32 |
| 5 | B Drive | Var. | 40 | 40 |
| 6 | Sub Bright | Var. | 14 | 14 |
| 7 | Sub Contrast | Var. | 9 | 9 |
| 8 | PAL/SECAM Sub Color | Fixed | 23 | 12 |
| 9 | NTSC Sub Color | Fixed | 16 | 16 |
| 10 | NTSC Sub Tint | Fixed | 13 | 13 |
| 11 | YUV Sub Tint | Fixed | 32 | 32 |
| 12 | AKB Option | Fixed | 0 | 0 |
| 13 | Peaking CFO & Delay Mode | Fixed | 1 | 1 |
| 14 | Sub Sharpness-RF | Fixed | 23 | 23 |

6. Video Adjust2

| No | Item | Var./Fixed | CL21Z30MQLXXAX | CL21Z30MQLXXAZ |
|---|---|---|---|---|
| 1 | Melody Volume | Fixed | 25 | 15 |
| 2 | RF AGC | Var. | 21 | 21 |
| 3 | IF AGC Speed | Fixed | 1 | 1 |
| 4 | VM Mode | Fixed | 0 | 0 |
| 5 | VM Gain | Fixed | 0 | 0 |
| 6 | VM Delay | Fixed | 0 | 0 |
| 7 | Blue Stretch | Fixed | 0 | 0 |
| 8 | G2 Adjust Bright | Fixed | 42 | 42 |
| 9 | Soft Clipping Level | Fixed | 1 | 1 |
| 10 | Peak White Limit | Fixed | 15 | 15 |
| 11 | Cathode Drive Level | Fixed | 6 | 6 |
| 12 | IF Demodulator | Fixed | 30 | 30 |
| 13 | Fast Filter IF PLL | Fixed | 0 | 0 |
| 14 | FOAB | Fixed | 3 | 3 |

7. Video Adjust3

| No | Item | Var./Fixed | CL21Z30MQLXXAX | CL21Z30MQLXXAZ |
|---|---|---|---|---|
| 1 | PIP Contrast | Fixed | 2 | 2 |
| 2 | PIP Bright | Fixed | 2 | 2 |
| 3 | PIP Tint | Fixed | 1 | 1 |
| 4 | PIP Color | Fixed | 10 | 10 |
| 5 | PIP YC Delay | Fixed | 12 | 12 |
| 6 | PIP PAL V.Pos | Fixed | 1 | 1 |
| 7 | PIP NTSC V. Pos | Fixed | 1 | 1 |
| 8 | PIP H. Pos | Fixed | 0 | 0 |
| 9 | PIP R Cutoff | Fixed | 9 | 9 |
| 10 | PIP G Cutoff | Fixed | 7 | 7 |
| 11 | PIP B Cutoff | Fixed | 8 | 8 |
| 12 | PIP R Drive | Fixed | 115 | 115 |
| 13 | PIP G Drive | Fixed | 127 | 127 |
| 14 | PIP B Drive | Fixed | 115 | 115 |
| 15 | PIP AGC Mode | Fixed | 3 | 2 |

8. Video Adjust4

| No | Item | Var./Fixed | CL21Z30MQLXXAX | CL21Z30MQLXXAZ |
|---|---|---|---|---|
| 1 | IF Preset Value 1 | Fixed | 32 | 32 |
| 2 | IF Preset Value 2 | Fixed | 32 | 32 |
| 3 | IF PLL Osc Preset Value | Fixed | 0 | 0 |
| 4 | Preset Gain R | Fixed | 20 | 20 |
| 5 | Preset Gain G | Fixed | 20 | 20 |
| 6 | Preset Gain B | Fixed | 20 | 20 |
| 7 | Turbo Center Frequency | Fixed | 0 | 0 |
| 8 | DCXO Caps/NICAM Center | Fixed | 59 | 59 |
| 9 | DCXO Scaning Control Gain | Fixed | 3 | 3 |
| 10 | Component H-Shift Offset | Fixed | 3 | 3 |
| 11 | Component R Cutoff | Fixed | 0 | 0 |
| 12 | Component B Cutoff | Fixed | 0 | 0 |
| 13 | Component R Drive | Fixed | 0 | 0 |
| 14 | Component B Drive | Fixed | 0 | 0 |

9. Video Adjust5

| No | Item | Var./Fixed | CL21Z30MQLXXAX | CL21Z30MQLXXAZ |
|---|---|---|---|---|
| 1 | System I Output Signal AMP | Fixed | 0 | 0 |
| 2 | Bypass of Chroma Base Band | Fixed | 1 | 0 |
| 3 | Fixed Beam Current | Fixed | 0 | 0 |
| 4 | Fixed Beam Current 1 | Fixed | 0 | 0 |
| 5 | IF Sensitivity | Fixed | 0 | 0 |
| 6 | Forced Digital Interface | Fixed | 0 | 0 |
| 7 | Enable Digital Interface | Fixed | 0 | 0 |
| 8 | Sync Performance Trick Mode | Fixed | 0 | 0 |
| 9 | Vertical Overscan | Fixed | 0 | 0 |
| 10 | Beam Current Limiting | Fixed | 0 | 0 |
| 11 | Comb filter | Fixed | 0 | 0 |
| 12 | De Interlace | Fixed | 0 | 0 |
| 13 | Chroma Trap Mode | Fixed | 0 | 0 |
| 14 | Black Current Measure Line | Fixed | 0 | 0 |
| 15 | EHT Tracking Mode | Fixed | 1 | 1 |

10. YC Delay

| No | Item | Var./Fixed | CL21Z30MQLXXAX | CL21Z30MQLXXAZ |
|---|---|---|---|---|
| 1 | PAL Delay | Fixed | 8 | 8 |
| 2 | NTSC Delay | Fixed | 8 | 8 |
| 3 | PAL AV Delay | Fixed | 8 | 8 |
| 4 | NTSC AV Delay | Fixed | 8 | 8 |

11. Others

| No | Item | Var./Fixed | CL21Z30MQLXXAX | CL21Z30MQLXXAZ |
|---|---|---|---|---|
| 1 | Service Blanking | Fixed | 0 | 0 |
| 2 | High Current Level | Fixed | 1 | 1 |
| 3 | Black Area | Fixed | 2 | 2 |
| 4 | Black Stretch | Fixed | 2 | 2 |
| 5 | OSD Brightness | Fixed | 25 | 25 |
| 6 | PWL Active | Fixed | 1 | 1 |
| 7 | Bypass Peaking Delay | Fixed | 0 | 0 |
| 8 | Ratio Pre. & After Shoot | Fixed | 2 | 2 |
| 9 | Ratio Posi. & Nega Peaks | Fixed | 1 | 1 |
| 10 | Dynamic Skin | Fixed | 1 | 1 |
| 11 | Gamma & White Stretch | Fixed | 1 | 1 |
| 12 | Video Depandent Coring | Fixed | 2 | 2 |
| 13 | PAL/NTSC Ident Sensitivity | Fixed | 1 | 1 |
| 14 | Comb Filter Diode Clamp | Fixed | 1 | 0 |
| 15 | DC Transfer Ratio | Fixed | 1 | 1 |

12. Bus Stop : Off

13. Checksum : 0000

14. G2 Adjust : Screen Adjust OK/NG/Obove

15. Reset

| Model | CL21Z30MQLXXAX | CL21Z30MQLXXAZ |
|---|---|---|
| MICOM(UOC3) Version NO. | T-HITNSA-1000 2005/**/** | T-HITNSA-1000 2005/**/** |
| White Balance(NTSC/PAL N_M) | 275/275/45ft | 275/275/45ft |
| | 265/265/2.5ft | 265/265/2.3ft |

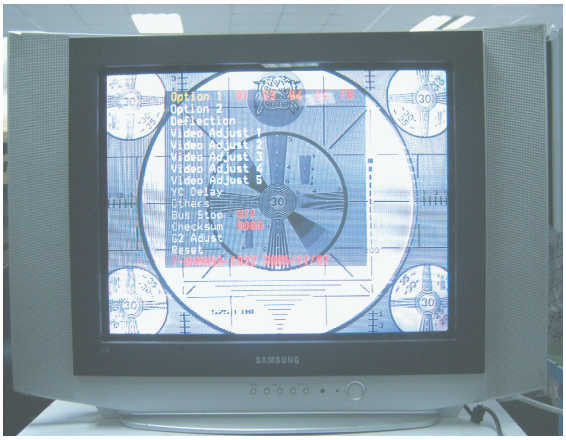
# 3-4 Service Adjustment

## 3-4-1 Adjusting the Picture Size

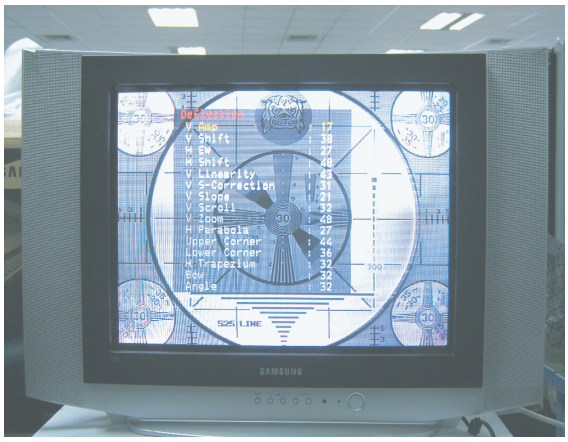
■ Since the K16B chassis includes a deflection adjustment of the Factory Data, adjustments must be performed according to the following procedures when replacing the Main Board.

1. Display the Lion pattern.

2. Press "Power Off → Mute → 1 → 8 → 2 → Power On" using the remote control and enter Factory Mode.



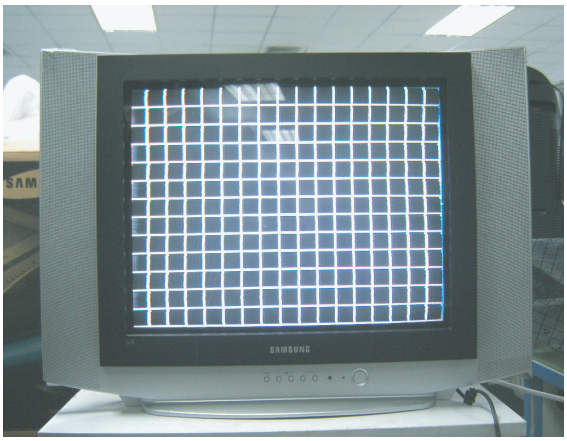

3. Enter Deflection Mode.




4. Adjust the V-AMP, V-SHIFT, H-AMP and H-SHIFT items so that the width becomes 5 and the height becomes 4.

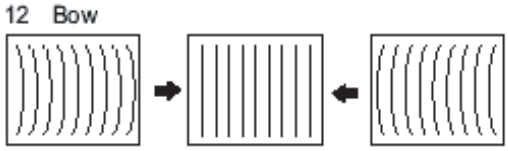
## 3-4-2 Adjusting the Picture Straight Lines

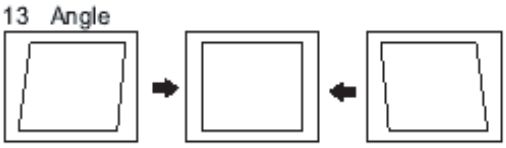
1. Display the Cross Hatch pattern.



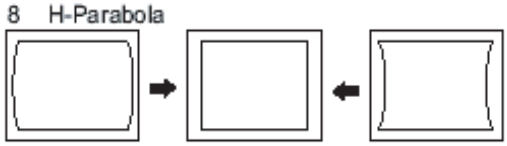
2. Adjust settings other than V-AMP, V-SHIFT, H-AMP and H-SHIFT so that straight lines are displayed without curves.

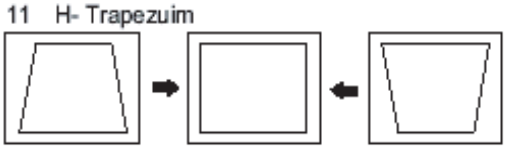
3. Adjust BOW and the Angle settings so that the center line becomes a straight line.



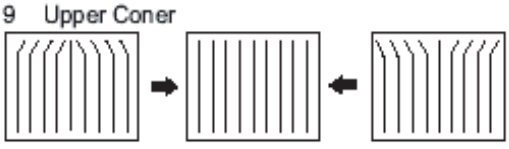



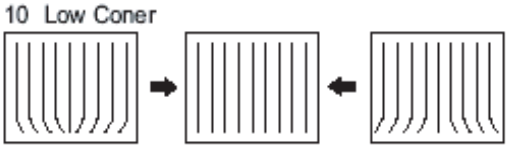

4. Adjust the H-Parabola and H-Trapezium settings so that the left and right lines become straight.



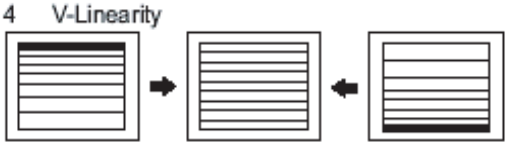



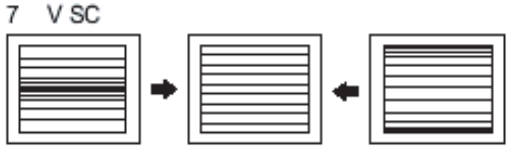

5. Adjust the Upper Corner and the Low Corner settings so that the end of the lines become straight.




6. Adjust the V-Linearity and V-SC settings so that the intervals of the horizontal lines become uniform.




7. When the adjustments are complete, display the Lion pattern and check that the picture size has not been changed. If there is no change, finish the adjustments.

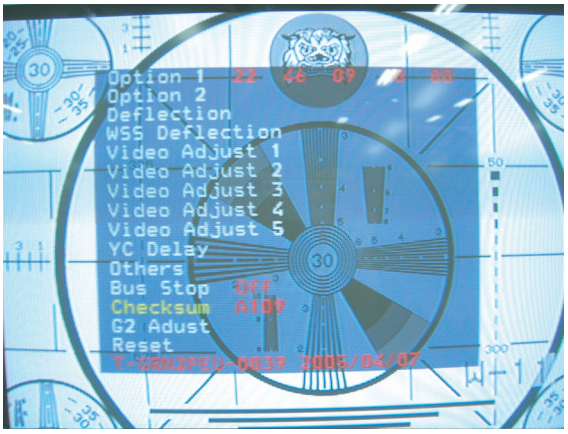
# 3-5 Software Upgrade

## 3-5-1 Checking the Version of the Software (Analog SW)

1. To enter Service Mode, press the keys on the remote control according to the following sequence. (in Stand-by status)

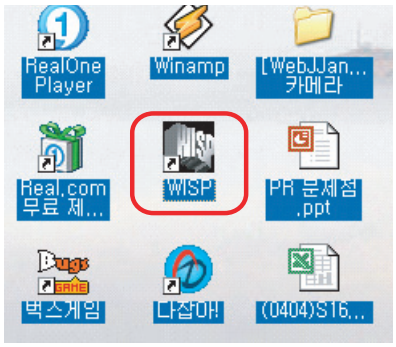
   Mute → 1 → 8 → 2 → Power On

2. When entering Service mode, the software information is displayed at the top of the service mode menu OSD.
   ex) T-HITNSA-1000 20XX/XX/XX

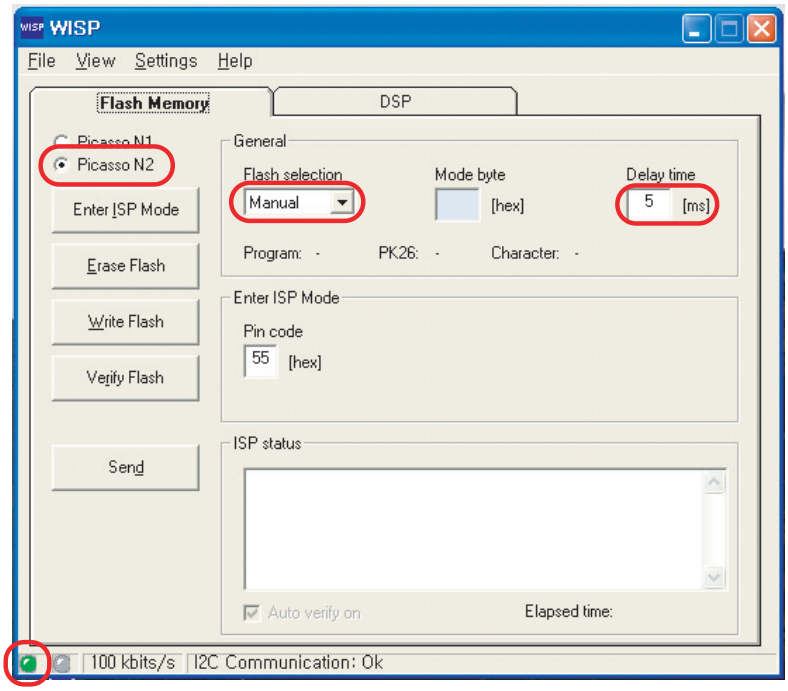


## 3-5-2 Service Download Procedure

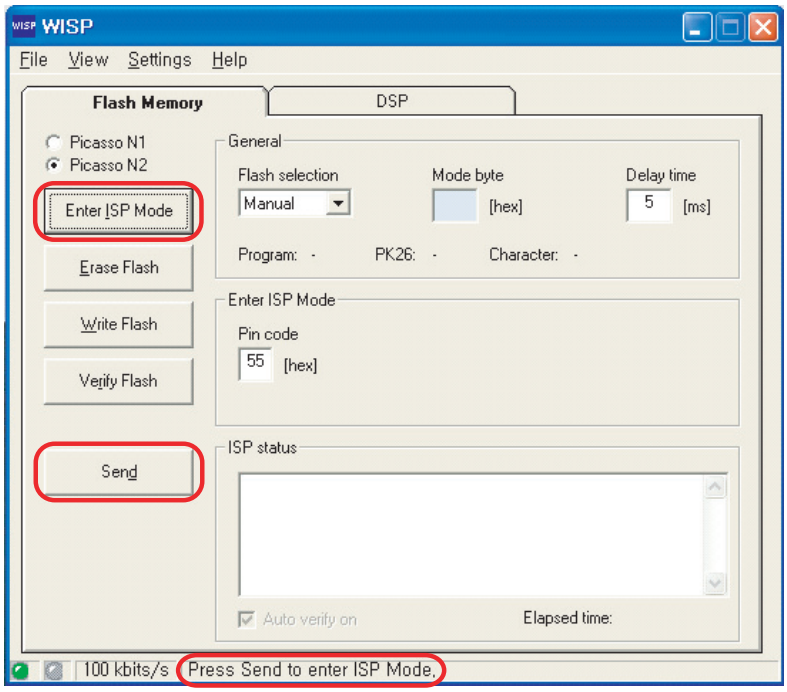
1. Double click the your desktop “WISP” icon.



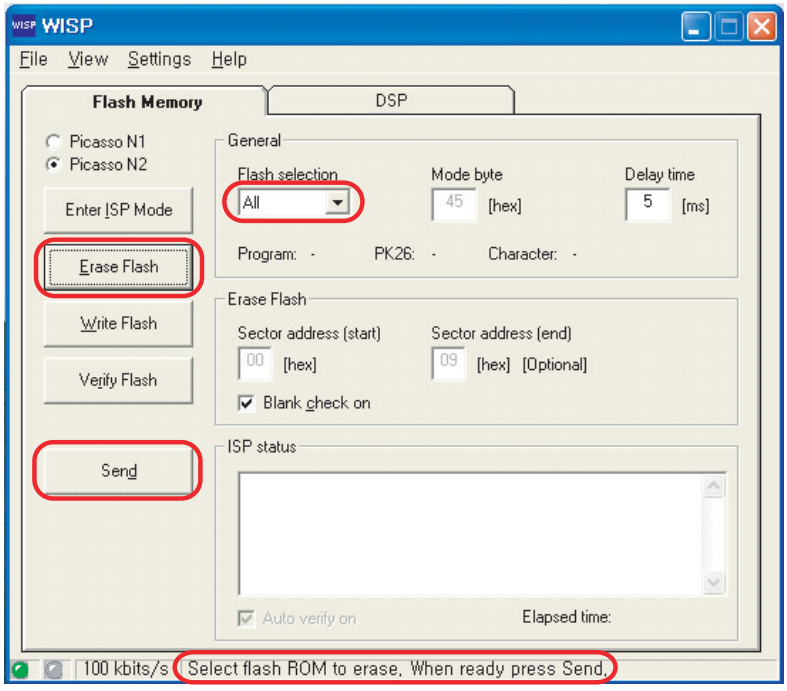

2. Check the standard
   - Check the appoint "Picasso N2"
   - Check the "Flash selection" item is appoint "Manual"
   - You can adjust program delay time for program speed but we use the normal "5[ms]"
   - Check the green lamp if this is sometime red lamp you can not programming



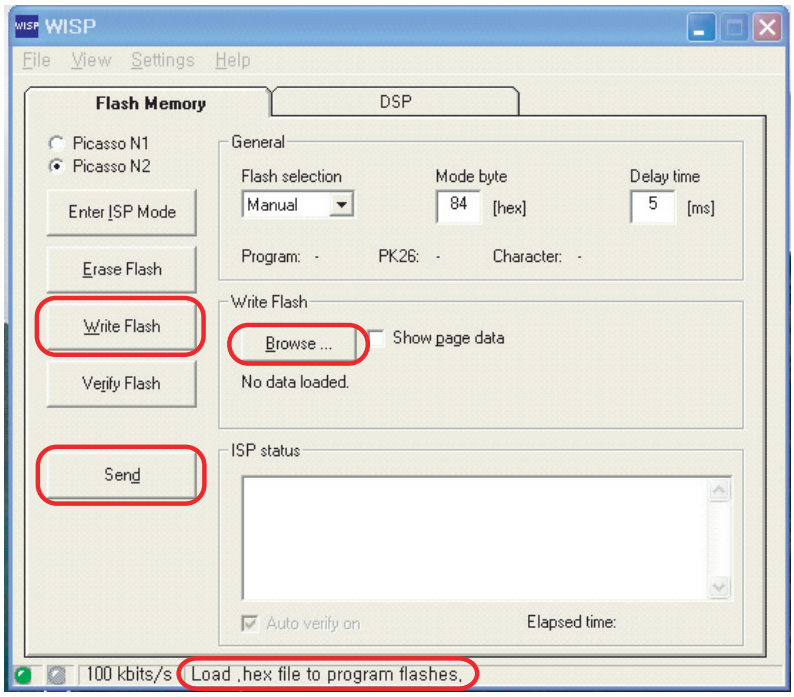
3. Check the IIC line
   - Click the “Enter ISP Mode” button For IIC bus line problem or not
   - Change the “Press Send to enter ISP Mode”
   - Click the “Send” button



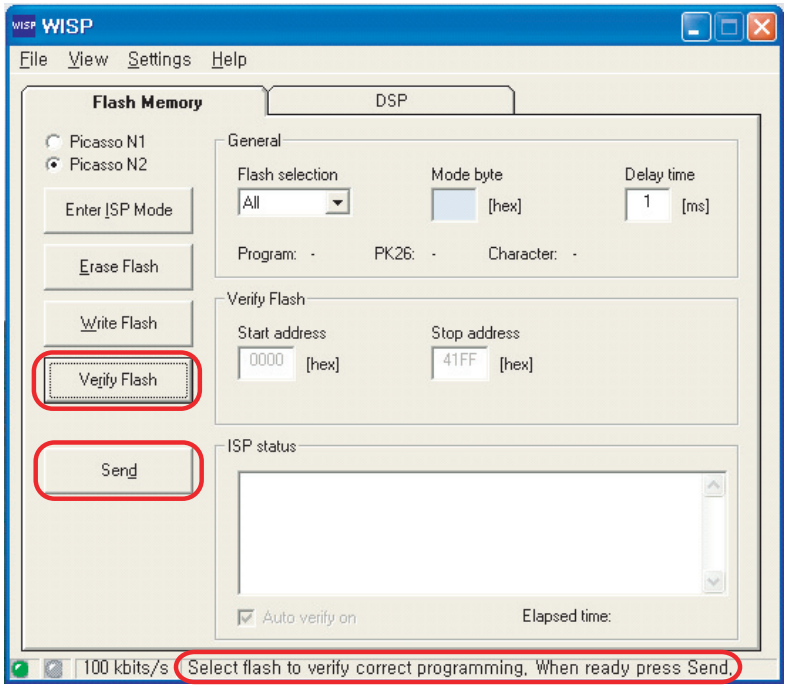

4. Erase before program
   - Click the “Erase Flash” button for before program erase
   - You can select flash selection item but we use normal “All” mode
   - Change the “Select flash ROM to erase. When ready press Send.”
   - Click the “Send” button



5. Write new program
   - Click the “Write Flash” button for new program download
   - Change the “Load.hex file to program flashes.”
   - Click the “Browse” button and find the new program folder in your computer
   - Click the “Send” button




6. Verify new program
   - Click the “Verify Flash” button
   - Change the “Select flash to verify correct programming. When ready press Send.”
   - Click the “Send” button

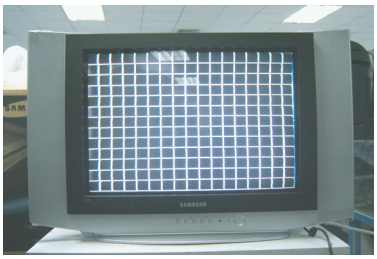


# 3-6 Replacements & Calibration

## 3-6-1 Adjusting the Focus

■ Adjustments must be performed according to the following procedures when replacing the K16B chassis, CRT PCB, FBT or CRT.

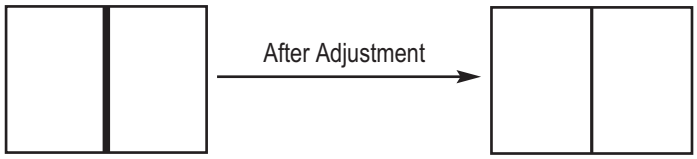
1. Display the Cross Hatch pattern. ⟶

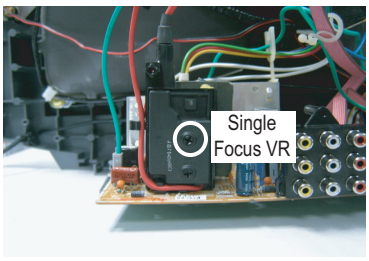


2. Set the Screen Adjustment to "Standard".

3. Turn the Static Focus VR clockwise to the maximum position.
   (End of clockwise direction)

4. Slowly turn the Static Focus VR counter clockwise so that the center vertical line is the most clearly displayed. [adjusted point : Center(2/1)]




5. Check the entire screen focus and repeat steps 3 to 4, if necessary.

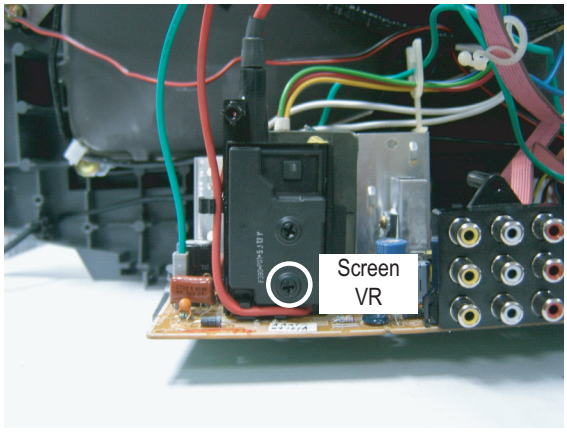
## 3-6-2 Adjusting the Screen Voltage

1. Select "Power Off → Mute → 1 → 8 → 2 → Power On" to enter Service Mode.

2. Initialize all settings to the values appropriate to the corresponding model.

3. Display the Toshiba pattern.

4. First check IBRM in "G2 Adjust" of Factory and adjust Screen VR until the color of IBRM item turns green.

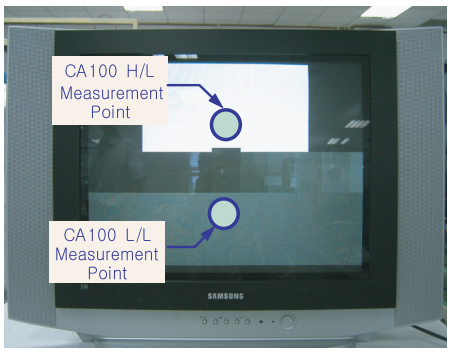


## 3-6-3 Adjusting the White Balance

1. Select "Power Off → Mute → 1 → 8 → 2 → Power On" to enter Service Mode.

2. Initialize all settings to the values appropriate to the corresponding model.

3. Display the Toshiba pattern and adjust the White Balance using CA100 with the coordinates of the corresponding model.



[ CA100 ]

4. Enter Video Adjust1 of Service Mode. Adjust Low/Light.
   - Adjust Sub Bright to set Y.
   - Adjust B Cutoff to set y.
   - Adjust R Cutoff to set x.

5. Enter Video Adjust1 of Service Mode. Adjust High/Light.
   - Adjust Sub Contrast to set Y.
   - Adjust B Drive to set y.
   - Adjust R Drive to set x.

6. Check Low/Light and readjust it if its value has been changed.

7. If you have readjusted Low/Light, readjust High/Light until the two values are identical to the coordinates of the corresponding model.

※ White Balance Standard Data

| No | Item | Model | | Required Adjustment |
|---|---|---|---|---|
| | | CL21Z30MQLXXAX | CL21Z30MQLXXAZ | |
| 1 | White Balance (NTSC/PAL N_M) | 275/275/45ft<br>265/265/2.5ft | 275/275/45ft<br>265/265/2.3ft | White Balance (Standard Data) |

## 3-6-4 Check List for the Screen Voltage and White Balance Adjustment

1. The Screen Voltage and White Balance are connected each other, and both of them have to be configured to the correct values.

2. Adjust the White Balance after the Screen Voltage was adjusted, and check if the Screen Voltage is normal after adjusting the White Balance.

3. If the White Balance is readjusted, check the Screen Voltage again.

4. When the adjustment is finished, check the following checklist.
   - If there is a spot on the screen when turning the TV set off/on, adjust the Screen Voltage again.
   - If there is a ghost line on the screen, adjust the Screen Voltage again.

# 5. Electrical Part List

## 5-1 CL21Z30MQLXXAO

You can search for the updated part code through ITSELF web site.
URL:http://itself.sec.samsung.co.kr

| Loc.No. | Code No. | Description | Specification | Q'ty | SA/SNA | Remark |
|---|---|---|---|---|---|---|
| | | **ASSY CHASSIS** | | | | |
| M0017 | AA91-09761E | ASSY CHASSIS | CL21Z30MQLXXAO,K16B,HITCH | 1 | S.N.A | |
| T0091 | AA94-15707A | ASSY PCB MISC-SIDE AV | 21Z30,S16C,HITCH | 1 | S.N.A | |
| T0245 | 0202-001522 | SOLDER-WIRE FLUX | LFA3-107,-,D1.2,96.5Sn/ | 0.003 | S.N.A | |
| JE01 | 3722-001061 | JACK-PHONE | 1P,3.6PI,AG,BLK,N | 1 | S.A | |
| JA01 | 3722-001164 | JACK-PIN | 3P,SN,WH:YE:RE,STRAIGHT | 1 | S.A | |
| T0245 | AA39-20068E | LEAD CONNECTOR-ASSY | ,8P,500,YBNH025-08,6 | 1 | S.A | |
| T0245 | AA39-20069C | LEAD CONNECTOR-ASSY | ,5P,400,YBNH025-05,6 | 1 | S.A | |
| | AA97-16384A | ASSY AUTO-AV | 21Z30,S16C,HITCH | 1 | S.N.A | |
| RA01 | 2001-000028 | R-CARBON(S) | 100OHM,5%,1/2W,AA,TP,2.4X6.4 | 1 | S.A | |
| RA02 | 2001-000028 | R-CARBON(S) | 100OHM,5%,1/2W,AA,TP,2.4X6.4 | 1 | S.A | |
| CA01 | 2202-000121 | C-CERAMIC,MLC-AXIAL | 0.1nF,10%,50V,Y5P,-, | 1 | S.A | |
| CA02 | 2202-000121 | C-CERAMIC,MLC-AXIAL | 0.1nF,10%,50V,Y5P,-, | 1 | S.A | |
| CA03 | 2401-002009 | C-AL | 100uF,20%,16V,GP,TP,6.3x7,5 | 1 | S.A | |
| CA04 | 2401-002009 | C-AL | 100uF,20%,16V,GP,TP,6.3x7,5 | 1 | S.A | |
| LA01 | 2701-000114 | INDUCTOR-AXIAL | 10UH,10%,2534 | 1 | S.A | |
| LA02 | 2701-000114 | INDUCTOR-AXIAL | 10UH,10%,2534 | 1 | S.A | |
| PCB | AA41-01178A | PCB SUB | CS21Z30,FR-1,1,A,1.6,245*245*1.6 | 1 | S.N.A | |
| T0107 | AA94-15708A | ASSY PCB MISC-PCB CRT | 21Z30,S16C,HITCH | 1 | S.N.A | |
| T0245 | 0202-001522 | SOLDER-WIRE FLUX | LFA3-107,-,D1.2,96.5Sn/ | 0.003 | S.N.A | |
| V999S | 3704-001197 | SOCKET-CRT | 8P+SEN,29PI,22.5PI,NI+SN,- | 1 | S.A | |
| T0100 | AA97-16385A | ASSY AUTO-CRT | 21Z30,S16C,HITCH | 1 | S.N.A | |
| D501 | 0402-000006 | DIODE-RECTIFIER | 1N4007GP,1KV,1A,DO-41,TP | 1 | S.A | |
| D502 | 0402-000006 | DIODE-RECTIFIER | 1N4007GP,1KV,1A,DO-41,TP | 1 | S.A | |
| D503 | 0402-000006 | DIODE-RECTIFIER | 1N4007GP,1KV,1A,DO-41,TP | 1 | S.A | |
| D504 | 0402-000006 | DIODE-RECTIFIER | 1N4007GP,1KV,1A,DO-41,TP | 1 | S.A | |
| DZ501 | 0403-000720 | DIODE-ZENER | MTZJ9.1B,8.57-9.01V,500mW,DO | 1 | S.A | |
| DZ502 | 0403-000720 | DIODE-ZENER | MTZJ9.1B,8.57-9.01V,500mW,DO | 1 | S.A | |
| DZ503 | 0403-000720 | DIODE-ZENER | MTZJ9.1B,8.57-9.01V,500mW,DO | 1 | S.A | |
| R501 | 2001-000281 | R-CARBON | 100OHM,5%,1/8W,AA,TP,1.8X3.2MM | 1 | S.A | |
| R504 | 2001-000281 | R-CARBON | 100OHM,5%,1/8W,AA,TP,1.8X3.2MM | 1 | S.A | |
| R505 | 2001-000281 | R-CARBON | 100OHM,5%,1/8W,AA,TP,1.8X3.2MM | 1 | S.A | |
| R551 | 2001-000281 | R-CARBON | 100OHM,5%,1/8W,AA,TP,1.8X3.2MM | 1 | S.A | |
| R514 | 2001-001062 | R-CARBON(S) | 10MOHM,5%,1/2W,AA,TP,2.4X6.4 | 1 | S.A | |
| R501H | 2002-001017 | R-COMPOSITION | 1Kohm,10%,1/2W,AA,TP,3.7x9 | 1 | S.A | |
| R502H | 2002-001017 | R-COMPOSITION | 1Kohm,10%,1/2W,AA,TP,3.7x9 | 1 | S.A | |
| R511 | 2002-001017 | R-COMPOSITION | 1Kohm,10%,1/2W,AA,TP,3.7x9 | 1 | S.A | |
| C508 | 2201-000723 | C-CERAMIC,DISC | 4.7NF,20%,3KV,Y5U,TP,16X5 | 1 | S.A | |
| C509 | 2201-000723 | C-CERAMIC,DISC | 4.7NF,20%,3KV,Y5U,TP,16X5 | 1 | S.A | |
| C505 | 2202-000825 | C-CERAMIC,MLC-AXIAL | 680pF,10%,50V,Y5P,TP | 1 | S.A | |
| C504 | 2301-001259 | C-FILM,LEAD-PPF | 100nF,5%,400V,TP,19x8x16 | 1 | S.A | |
| C506 | 2401-000430 | C-AL | 10uF,20%,250V,GP,TP,10x16mm,5m | 1 | S.A | |
| C507 | 2401-000430 | C-AL | 10uF,20%,250V,GP,TP,10x16mm,5m | 1 | S.A | |
| EL501 | 6042-000001 | EYELET | ID2.2,OD2.7,L3.1,NI+SN,BSP3-1/2H | 1 | S.N.A | |
| EL502 | 6042-000001 | EYELET | ID2.2,OD2.7,L3.1,NI+SN,BSP3-1/2H | 1 | S.N.A | |
| LX085 | AA27-90001B | COIL-SPARK,GAP | S-23,1.5KV,-,-,-,-,-,-, | 1 | S.A | |
| LX085 | AA27-90001B | COIL-SPARK,GAP | S-23,1.5KV,-,-,-,-,-,-, | 1 | S.A | |
| LX085 | AA27-90001B | COIL-SPARK,GAP | S-23,1.5KV,-,-,-,-,-,-, | 1 | S.A | |
| GT501 | BH71-40300A | PIN-HINGE | BRASS,D2.36!,HEAT/SINK,SN | 1 | S.N.A | |
| GT502 | BH71-40300A | PIN-HINGE | BRASS,D2.36!,HEAT/SINK,SN | 1 | S.N.A | |
| GT503 | BH71-40300A | PIN-HINGE | BRASS,D2.36!,HEAT/SINK,SN | 1 | S.N.A | |
| GT504 | BH71-40300A | PIN-HINGE | BRASS,D2.36!,HEAT/SINK,SN | 1 | S.N.A | |
| PCB | AA41-01177A | PCB CRT | CS21Z30,FR-1,1,A,1.6,245*245*1.6 | 1 | S.N.A | |
| F101 | 2901-000299 | FILTER-EMI ON BOARD | -,6A,UL/CSA,-,9x7.5, | 1 | S.A | |
| R502 | 2001-000241 | R-CARBON | 1.5KOHM,5%,1/8W,AA,TP,1.8X3.2MM | 1 | S.A | |
| R503 | 2001-000241 | R-CARBON | 1.5KOHM,5%,1/8W,AA,TP,1.8X3.2MM | 1 | S.A | |
| R506 | 2001-000241 | R-CARBON | 1.5KOHM,5%,1/8W,AA,TP,1.8X3.2MM | 1 | S.A | |
| T0310 | 4715-001036 | SURGE ABSORBER | 500V,20%,-,-,TP | 1 | S.N.A | |
| L505 | 2701-000142 | INDUCTOR-AXIAL | 1UH,10%,2534 | 1 | S.A | |
| IC501 | AA96-50311P | ASSY HEAT SINK P | AA62-30175D,TDA6108AJF, | 1 | S.N.A | |
| M0081 | 6003-000334 | SCREW-TAPTITE | RH,+,2S,M3,L6,ZPC(YEL),SWR | 1 | S.N.A | |
| T0175 | AA62-30175D | HEAT SINK-PS | -,SECC,T1.0,-,33X15X30 FT-2 | 1 | S.N.A | |
| T0074 | 1201-002244 | IC-VIDEO AMP | TDA6108AJF,DBS9MPF,9P,21.8x | 1 | S.A | |

| Loc.No. | Code No. | Description | Specification | Q'ty | SA/SNA | Remark |
|---|---|---|---|---|---|---|
| CN502 | 3711-002648 | HEADER-BOARD TO CABLE | BOX,9P,1R,2.5mm,ST | 1 | S.A | |
| M0014 | AA94-15738E | ASSY PCB MAIN | CL21Z30MQLXXAO,K16B,HITCH | 1 | S.A | |
| T0245 | 0202-001522 | SOLDER-WIRE FLUX | LFA3-107,-,D1.2,96.5Sn/ | 0.003 | S.N.A | |
| D408 | 0402-001295 | DIODE-RECTIFIER | GUR460L-5700,600V,4A,DO- | 1 | S.A | |
| D809A | 0402-001374 | DIODE-RECTIFIER | FFPF06U20S,200V,6A,TO-22 | 1 | S.A | |
| D801S | 0402-001477 | DIODE-BRIDGE | GSIB460,600V,4A,SIP-4,ST | 1 | S.A | |
| D404 | 0402-001599 | DIODE-RECTIFIER | DGP30L,1500,3A,DO-201AD( | 1 | S.A | |
| D811 | 0402-001603 | DIODE-RECTIFIER | MUR480E,800V,4A,DO-201AD | 1 | S.A | |
| D807 | 0402-001604 | DIODE-RECTIFIER | MUR420,200V,4A,DO-201AD, | 1 | S.A | |
| ⚠ PC801S | 0604-001032 | PHOTO-COUPLER | TR,170-260%,300mW,DIP-4,ST | 1 | S.A | |
| IC112 | 1103-001211 | IC-EEPROM | 24C16,2Kx8Bit,DIP,8P,10.16x7.1 | 1 | S.A | |
| T0087 | 1203-001006 | IC-POSI.FIXED REG. | 78R05,TO-220F,4P,-,PL | 1 | S.A | |
| T0087 | 1203-004010 | IC-POSI.FIXED REG. | KA78R08CTU,TO-220F,4P | 1 | S.A | |
| T0900 | 1404-001045 | THERMISTOR-NTC | 4.7ohm,4.565A,2900K,-,-,- | 1 | S.A | |
| R813 | 2009-001011 | R-METAL PLATE | 0.18ohm,10%,5W,CL,TP,5x14x | 1 | S.A | |
| ⚠ CY802S | 2201-000446 | C-CERAMIC,DISC | 3.3NF,20%,400V,Y5U,BK,15X | 1 | S.A | |
| C405 | 2301-001338 | C-FILM,LEAD-OTHER | 0.68NF,5%,1.6KV,BK,28X | 1 | S.A | |
| ⚠ CR405S | 2303-000296 | C-FILM,LEAD-PPF | 18nF,5%,630V,BK,20x16x9. | 1 | S.A | |
| ⚠ CX801S | 2306-000318 | C-FILM,LEAD-PPF | 220nF,20%,275V,BK,26x7x1 | 1 | S.A | |
| ⚠ CR402S | 2306-000330 | C-FILM,LEAD-PPF | 7.7NF,3%,1.6KV,BK,28.5X1 | 1 | S.A | |
| ⚠ CR403S | 2306-000357 | C-FILM,LEAD-PPF | 8.2nF,5%,1.6KV,BK,20x9.5 | 1 | S.A | |
| ⚠ CR406S | 2306-001004 | C-FILM,LEAD-PPF | 300nF,5%,400V,BK,26x14x2 | 1 | S.A | |
| C800 | 2401-001652 | C-AL | 680uF,20%,250V,GP,BK,25x50mm,1 | 1 | S.A | |
| C803 | 2401-001652 | C-AL | 680uF,20%,250V,GP,BK,25x50mm,1 | 1 | S.A | |
| X201 | 2801-003316 | CRYSTAL-UNIT | 24.576MHz,30ppm,28-AAM,20pF | 1 | S.A | |
| SF101 | 2904-001107 | FILTER-SAW AV | 45.75MHz,SIP5K,TP,12.6dB,N | 1 | S.A | |
| SF102 | 2904-001418 | FILTER-SAW AV | 45.75MHZ,-,ST,-,-,- | 1 | S.A | |
| SW906 | 3404-001004 | SWITCH-TACT | 12V,50mA,160gf,8.4x22.7mm,SP | 1 | S.A | |
| FD802 | 3601-000281 | FUSE-CARTRIDGE | 250V,4A,TIME-LAG,GLASS,5. | 1 | S.A | |
| CN602 | 3711-002644 | HEADER-BOARD TO CABLE | BOX,5P,1R,2.5mm,ST | 1 | S.A | |
| CN701 | 3711-002647 | HEADER-BOARD TO CABLE | BOX,8P,1R,2.5mm,ST | 1 | S.A | |
| CN501 | 3711-002648 | HEADER-BOARD TO CABLE | BOX,9P,1R,2.5mm,ST | 1 | S.A | |
| CN601 | 3711-003043 | HEADER-BOARD TO CABLE | BOX,4P,1R,2.5MM,ST | 1 | S.A | |
| JA701 | 3722-001333 | JACK-PIN | 9P,NI,BLK,ANGLE | 1 | S.A | |
| JA702 | 3722-001457 | JACK-PIN | 3P/9P,3.4mm,NI,GRN/BLU/RED,- | 1 | S.A | |
| ⚠ T801S | AA26-00228D | TRANS SWITCHING | 42B135-**,CORE,80V~280V, | 1 | S.A | |
| T444 | AA26-00259A | TRANS FBT | FQH21A001,CPTTV,3.33mH,FUR3966 | 1 | S.A | |
| T401 | AA26-50001M | TRANS-H.DRIVE | -,-,-,80mH,-,-,520uH,-,-,- | 1 | S.A | |
| T0296 | AA27-00035B | COIL LINEARITY | 30uH,DR15x18,11.0mm,19x45 | 1 | S.A | |
| T0010 | AA27-00067A | COIL CHOKE | -,240uH,YL9N 12x20 C:6.0,0.12 | 1 | S.A | |
| T0010 | AA27-00286B | COIL CHOKE | 1mH,10%,0.5ohm,1A,DR1420C:6.0 | 1 | S.A | |
| ⚠ LX801S | AA29-00015A | FILTER LINE NOISE | WS32W8,28-20MH 1.5A,+- | 1 | S.A | |
| RM901 | AA32-00015A | Module Remocon | FRP-3521H31,38KHZ,940MM,M | 1 | S.A | |
| T0245 | AA39-20031D | LEAD CONNECTOR-ASSY | UL1007#26,9P,500,SMH | 1 | S.A | |
| CIS3 | AA40-00016A | TUNER-F/S | TDQ-6F/13F2S,NTSC,181CH,45.75M | 1 | S.A | |
| GT301 | AA60-40012F | PIN-GT | 4P,2.36PI,6/12/14mm,NYLON66,LOCKI | 1 | S.N.A | |
| GT801 | AA60-40012G | PIN-GT | 3P,2.36PI,10/5mm,NYLON66,LOCKING | 1 | S.N.A | |
| IC802 | AA96-00243T | ASSY HEAT SINK P | AA62-00045A,KA78R08,TVD | 1 | S.N.A | |
| CIS1 | 0205-001154 | OIL-SILICON | G746,-,- | 0.1 | S.N.A | |
| T0087 | 1203-001944 | IC-POSI.FIXED REG. | 78RM33,TO-220,3P,-,PL | 1 | S.A | |
| M0081 | 6003-000334 | SCREW-TAPTITE | RH,+,2S,M3,L6,ZPC(YEL),SWR | 1 | S.N.A | |
| T0175 | AA62-00045A | HEAT SINK-PS | -,-,T1.0,-,-,DREAM,-,-,-,-, | 1 | S.N.A | |
| Q404 | AA96-00624G | ASSY HEAT SINK P | SCREW,AA62-00057B,FQP63 | 1 | S.N.A | |
| CIS1 | 0205-001154 | OIL-SILICON | G746,-,- | 0.2 | S.N.A | |
| T0175 | AA62-00057B | HEAT SINK-PS | CT-29K12P,A1050S,1.0,41,60, | 1 | S.N.A | |
| M0081 | 6003-000334 | SCREW-TAPTITE | RH,+,2S,M3,L6,ZPC(YEL),SWR | 1 | S.N.A | |
| Q409 | 0505-001723 | FET-SILICON | FQP630TSTU,N,200V,9A,0.4OHM, | 1 | S.A | |
| LD901 | AA96-01710A | ASSY MISC P-LED GUIDE | LTL-307JGTH128R | 1 | S.N.A | |
| IC602 | AA96-02124A | ASSY HEAT SINK P | AA62-30182G,SCREW,TDA72 | 1 | S.N.A | |
| CIS1 | 0205-001154 | OIL-SILICON | G746,-,- | 0.2 | S.N.A | |
| M0081 | 6003-000333 | SCREW-TAPTITE | RH,+,2S,M3,L10,ZPC(YEL),SW | 1 | S.N.A | |
| T0607 | AA61-01390A | BRACKET-IC | CT-29A20HR,SECC,T1.0 | 1 | S.N.A | |
| T0066 | AA62-30182G | HEAT SINK-ES | CT-29A20HR,A6063S,T2.0,26.2 | 1 | S.N.A | |
| T0085 | 1201-002118 | IC-AUDIO AMP | TDA7297SA,ZIP,15P,-,DUAL,32 | 1 | S.A | |
| Q401 | AA96-02906C | ASSY HEAT SINK P | AA62-00145A,6003-000333 | 1 | S.N.A | |
| CIS1 | 0205-001154 | OIL-SILICON | G746,-,- | 0.2 | S.N.A | |
| M0081 | 6003-000333 | SCREW-TAPTITE | RH,+,2S,M3,L10,ZPC(YEL),SW | 1 | S.N.A | |
| T0105 | AA60-30001A | WASHER-PLATE | M3,ID3.5,15X8.5,T1.0,SBHG | 1 | S.N.A | |
| T0098 | AA62-00145A | HEAT SINK | KS9A,A1050,T1.0,23,50,WHITE,PS | 1 | S.N.A | |
| | 0502-001264 | TR-POWER | 2SC5936,NPN,40000mW,TOP-3E,ST,5 | 1 | S.A | |
| ⚠ IC801S | AA96-50371T | ASSY HEAT SINK P | AA62-30181H,SCREW,STR-W | 1 | S.N.A | |
| CIS1 | 0205-001154 | OIL-SILICON | G746,-,- | 0.1 | S.N.A | |
| M0081 | 6003-000333 | SCREW-TAPTITE | RH,+,2S,M3,L10,ZPC(YEL),SW | 1 | S.N.A | |
| T0066 | AA62-30181H | HEAT SINK-ES | -,AL6063 EXTR.,2,WHT,50MM,- | 1 | S.N.A | |
| IC063 | AA13-00116A | IC HYBRID | STR-W6750F,6,-20 to +115,TO-3P | 1 | S.A | |
| M0014 | AA97-16414E | ASSY AUTO-MAIN | CL21Z30MQLXXAO,K16B,HITCH | 1 | S.N.A | |

| Loc.No. | Code No. | Description | Specification | Q'ty | SA/SNA | Remark |
|---|---|---|---|---|---|---|
| D201 | 0401-000005 | DIODE-SWITCHING | 1N4148,75V,150mA,DO-35,T | 1 | S.A | |
| D409 | 0401-000005 | DIODE-SWITCHING | 1N4148,75V,150mA,DO-35,T | 1 | S.A | |
| D510 | 0401-000005 | DIODE-SWITCHING | 1N4148,75V,150mA,DO-35,T | 1 | S.A | |
| D511 | 0401-000005 | DIODE-SWITCHING | 1N4148,75V,150mA,DO-35,T | 1 | S.A | |
| D512 | 0401-000005 | DIODE-SWITCHING | 1N4148,75V,150mA,DO-35,T | 1 | S.A | |
| D513 | 0401-000005 | DIODE-SWITCHING | 1N4148,75V,150mA,DO-35,T | 1 | S.A | |
| D606 | 0401-000005 | DIODE-SWITCHING | 1N4148,75V,150mA,DO-35,T | 1 | S.A | |
| D630 | 0401-000005 | DIODE-SWITCHING | 1N4148,75V,150mA,DO-35,T | 1 | S.A | |
| DZ403 | 0401-000005 | DIODE-SWITCHING | 1N4148,75V,150mA,DO-35,T | 1 | S.A | |
| DZ816 | 0401-000005 | DIODE-SWITCHING | 1N4148,75V,150mA,DO-35,T | 1 | S.A | |
| D804 | 0401-000006 | DIODE-SWITCHING | BAV21,250V,200mA,DO-35,T | 1 | S.A | |
| D805 | 0401-000006 | DIODE-SWITCHING | BAV21,250V,200mA,DO-35,T | 1 | S.A | |
| D402 | 0402-000132 | DIODE-RECTIFIER | 1N4004,400V,1A,DO-41,TP | 1 | S.A | |
| D403 | 0402-000132 | DIODE-RECTIFIER | 1N4004,400V,1A,DO-41,TP | 1 | S.A | |
| D813 | 0402-000493 | DIODE-RECTIFIER | 1R5GU41,400V,1.5A,DO-15L | 1 | S.A | |
| D405 | 0402-000534 | DIODE-RECTIFIER | RG10V,400V,1.2A,DO-201,T | 1 | S.A | |
| D401 | 0402-000537 | DIODE-RECTIFIER | RH1A,600V,0.6A,DO-204AC, | 1 | S.A | |
| D406 | 0402-000540 | DIODE-RECTIFIER | RU20A,600V,1.5A,-,TP | 1 | S.A | |
| D407 | 0402-000540 | DIODE-RECTIFIER | RU20A,600V,1.5A,-,TP | 1 | S.A | |
| D303 | 0402-000546 | DIODE-RECTIFIER | TVR10G,400V,1A,DO-41,TP | 1 | S.A | |
| D803 | 0402-000546 | DIODE-RECTIFIER | TVR10G,400V,1A,DO-41,TP | 1 | S.A | |
| DZ810 | 0403-000508 | DIODE-ZENER | MTZJ5.6B,5.45-5.73V,500mW,DO | 1 | S.A | |
| DZ306 | 0403-000700 | DIODE-ZENER | TZP33A,5%,1000mW,DO-41,TP | 1 | S.A | |
| DZ811 | 0403-000700 | DIODE-ZENER | TZP33A,5%,1000mW,DO-41,TP | 1 | S.A | |
| DZ812 | 0403-000700 | DIODE-ZENER | TZP33A,5%,1000mW,DO-41,TP | 1 | S.A | |
| DZ605 | 0403-000714 | DIODE-ZENER | MTZJ3.3B,3.32-3.53V,500mW,DO | 1 | S.A | |
| DZ819 | 0403-000714 | DIODE-ZENER | MTZJ3.3B,3.32-3.53V,500mW,DO | 1 | S.A | |
| DZ510 | 0403-000716 | DIODE-ZENER | MTZJ4.7B,4.59-4.77V,500mW,DO | 1 | S.A | |
| DZ802 | 0403-000717 | DIODE-ZENER | MTZJ5.1B,4.94-5.2V,500mW,DO- | 1 | S.A | |
| DZ903 | 0403-000717 | DIODE-ZENER | MTZJ5.1B,4.94-5.2V,500mW,DO- | 1 | S.A | |
| DZ807 | 0403-000718 | DIODE-ZENER | MTZJ6.8B,6.52-6.79V,500mW,DO | 1 | S.A | |
| DZ901 | 0403-000719 | DIODE-ZENER | MTZJ7.5B,7.11-7.44V,500mW,DO | 1 | S.A | |
| DZ902 | 0403-000719 | DIODE-ZENER | MTZJ7.5B,7.11-7.44V,500mW,DO | 1 | S.A | |
| DZ701 | 0403-000720 | DIODE-ZENER | MTZJ9.1B,8.57-9.01V,500mW,DO | 1 | S.A | |
| DZ702 | 0403-000720 | DIODE-ZENER | MTZJ9.1B,8.57-9.01V,500mW,DO | 1 | S.A | |
| DZ703 | 0403-000720 | DIODE-ZENER | MTZJ9.1B,8.57-9.01V,500mW,DO | 1 | S.A | |
| DZ813 | 0403-000720 | DIODE-ZENER | MTZJ9.1B,8.57-9.01V,500mW,DO | 1 | S.A | |
| DZ818 | 0403-000720 | DIODE-ZENER | MTZJ9.1B,8.57-9.01V,500mW,DO | 1 | S.A | |
| DZ303 | 0403-001221 | DIODE-ZENER | UZ39BSB,35.36-37.19V,500mW,D | 1 | S.A | |
| DZ905 | 0403-001317 | DIODE-ZENER | MTZJ3.0B,3.01-3.22V,500mW,DO | 1 | S.A | |
| DZ814 | 0403-001320 | DIODE-ZENER | MTZJ6.2C,6.16-6.4V,500mW,DO- | 1 | S.A | |
| DZ815 | 0403-001321 | DIODE-ZENER | MTZJ6.8C,6.7-6.97V,500mW,DO- | 1 | S.A | |
| DZ301 | 0403-001329 | DIODE-ZENER | MTZJ24B,22.75-23.73V,500mW,D | 1 | S.A | |
| DZ302 | 0403-001329 | DIODE-ZENER | MTZJ24B,22.75-23.73V,500mW,D | 1 | S.A | |
| DZ305 | 0403-001329 | DIODE-ZENER | MTZJ24B,22.75-23.73V,500mW,D | 1 | S.A | |
| DZ242 | 0403-001373 | DIODE-ZENER | MTZJ5.1A,4.85-5.03V,500mW,DO | 1 | S.A | |
| Q207 | 0501-000283 | TR-SMALL SIGNAL | KSA539,PNP,400mW,TO-92,T | 1 | S.A | |
| Q272 | 0501-000283 | TR-SMALL SIGNAL | KSA539,PNP,400mW,TO-92,T | 1 | S.A | |
| Q903 | 0501-000283 | TR-SMALL SIGNAL | KSA539,PNP,400mW,TO-92,T | 1 | S.A | |
| Q904 | 0501-000283 | TR-SMALL SIGNAL | KSA539,PNP,400mW,TO-92,T | 1 | S.A | |
| Q403 | 0501-000369 | TR-SMALL SIGNAL | KSC2331-Y,NPN,1000mW,TO- | 1 | S.A | |
| Q273 | 0501-000389 | TR-SMALL SIGNAL | KSC815,NPN,400mW,TO-92,T | 1 | S.A | |
| Q501 | 0501-000389 | TR-SMALL SIGNAL | KSC815,NPN,400mW,TO-92,T | 1 | S.A | |
| Q502 | 0501-000389 | TR-SMALL SIGNAL | KSC815,NPN,400mW,TO-92,T | 1 | S.A | |
| Q805 | 0501-000389 | TR-SMALL SIGNAL | KSC815,NPN,400mW,TO-92,T | 1 | S.A | |
| Q806 | 0501-000389 | TR-SMALL SIGNAL | KSC815,NPN,400mW,TO-92,T | 1 | S.A | |
| Q902 | 0501-000389 | TR-SMALL SIGNAL | KSC815,NPN,400mW,TO-92,T | 1 | S.A | |
| Q905 | 0501-000389 | TR-SMALL SIGNAL | KSC815,NPN,400mW,TO-92,T | 1 | S.A | |
| IC012 | 1203-001217 | IC-POSI.ADJUST REG. | 431,TO-92,3P,4.58MIL | 1 | S.A | |
| VP801 | 1405-000152 | VARISTOR | 560V,2500A,14x8.5mm,TP | 1 | S.A | |
| ⚠ VX801S | 1405-000187 | VARISTOR | 615Vdc,1250A,12.5x7mm,TP | 1 | S.A | |
| R909 | 2001-000007 | R-CARBON | 3KOHM,5%,1/8W,AA,TP,1.8X3.2MM | 1 | S.A | |
| R915 | 2001-000007 | R-CARBON | 3KOHM,5%,1/8W,AA,TP,1.8X3.2MM | 1 | S.A | |
| R905 | 2001-000008 | R-CARBON | 15KOHM,5%,1/8W,AA,TP,1.8X3.2MM | 1 | S.A | |
| R424 | 2001-000012 | R-CARBON | 680KOHM,5%,1/8W,AA,TP,1.8X3.2MM | 1 | S.A | |
| R306 | 2001-000016 | R-CARBON(S) | 1OHM,5%,1/2W,AA,TP,2.4X6.4MM | 1 | S.A | |
| R405 | 2001-000020 | R-CARBON(S) | 22OHM,5%,1/2W,AA,TP,2.4X6.4M | 1 | S.A | |
| R406 | 2001-000028 | R-CARBON(S) | 100OHM,5%,1/2W,AA,TP,2.4X6.4 | 1 | S.A | |
| R807 | 2001-000037 | R-CARBON(S) | 330OHM,5%,1/2W,AA,TP,2.4X6.4 | 1 | S.A | |
| R428 | 2001-000258 | R-CARBON | 1.8KOHM,5%,1/8W,AA,TP,1.8X3.2MM | 1 | S.A | |
| L110 | 2001-000281 | R-CARBON | 100OHM,5%,1/8W,AA,TP,1.8X3.2MM | 1 | S.A | |
| L199 | 2001-000281 | R-CARBON | 100OHM,5%,1/8W,AA,TP,1.8X3.2MM | 1 | S.A | |
| R123 | 2001-000281 | R-CARBON | 100OHM,5%,1/8W,AA,TP,1.8X3.2MM | 1 | S.A | |
| R215 | 2001-000281 | R-CARBON | 100OHM,5%,1/8W,AA,TP,1.8X3.2MM | 1 | S.A | |
| R216 | 2001-000281 | R-CARBON | 100OHM,5%,1/8W,AA,TP,1.8X3.2MM | 1 | S.A | |
| R217 | 2001-000281 | R-CARBON | 100OHM,5%,1/8W,AA,TP,1.8X3.2MM | 1 | S.A | |
| R301 | 2001-000281 | R-CARBON | 100OHM,5%,1/8W,AA,TP,1.8X3.2MM | 1 | S.A | |

| Loc.No. | Code No. | Description | Specification | Q'ty | SA/SNA | Remark |
|---|---|---|---|---|---|---|
| R307 | 2001-000281 | R-CARBON | 100OHM,5%,1/8W,AA,TP,1.8X3.2MM | 1 | S.A | |
| R419 | 2001-000281 | R-CARBON | 100OHM,5%,1/8W,AA,TP,1.8X3.2MM | 1 | S.A | |
| R609 | 2001-000281 | R-CARBON | 100OHM,5%,1/8W,AA,TP,1.8X3.2MM | 1 | S.A | |
| R726 | 2001-000281 | R-CARBON | 100OHM,5%,1/8W,AA,TP,1.8X3.2MM | 1 | S.A | |
| R727 | 2001-000281 | R-CARBON | 100OHM,5%,1/8W,AA,TP,1.8X3.2MM | 1 | S.A | |
| R730 | 2001-000281 | R-CARBON | 100OHM,5%,1/8W,AA,TP,1.8X3.2MM | 1 | S.A | |
| R906 | 2001-000281 | R-CARBON | 100OHM,5%,1/8W,AA,TP,1.8X3.2MM | 1 | S.A | |
| R908 | 2001-000281 | R-CARBON | 100OHM,5%,1/8W,AA,TP,1.8X3.2MM | 1 | S.A | |
| R910 | 2001-000281 | R-CARBON | 100OHM,5%,1/8W,AA,TP,1.8X3.2MM | 1 | S.A | |
| R920 | 2001-000281 | R-CARBON | 100OHM,5%,1/8W,AA,TP,1.8X3.2MM | 1 | S.A | |
| R933 | 2001-000281 | R-CARBON | 100OHM,5%,1/8W,AA,TP,1.8X3.2MM | 1 | S.A | |
| R935 | 2001-000281 | R-CARBON | 100OHM,5%,1/8W,AA,TP,1.8X3.2MM | 1 | S.A | |
| R936 | 2001-000281 | R-CARBON | 100OHM,5%,1/8W,AA,TP,1.8X3.2MM | 1 | S.A | |
| R941 | 2001-000281 | R-CARBON | 100OHM,5%,1/8W,AA,TP,1.8X3.2MM | 1 | S.A | |
| R218 | 2001-000290 | R-CARBON | 10KOHM,5%,1/8W,AA,TP,1.8X3.2MM | 1 | S.A | |
| R311 | 2001-000290 | R-CARBON | 10KOHM,5%,1/8W,AA,TP,1.8X3.2MM | 1 | S.A | |
| R607 | 2001-000290 | R-CARBON | 10KOHM,5%,1/8W,AA,TP,1.8X3.2MM | 1 | S.A | |
| R608 | 2001-000290 | R-CARBON | 10KOHM,5%,1/8W,AA,TP,1.8X3.2MM | 1 | S.A | |
| R620 | 2001-000290 | R-CARBON | 10KOHM,5%,1/8W,AA,TP,1.8X3.2MM | 1 | S.A | |
| R623 | 2001-000290 | R-CARBON | 10KOHM,5%,1/8W,AA,TP,1.8X3.2MM | 1 | S.A | |
| R927 | 2001-000302 | R-CARBON | 10OHM,5%,1/8W,AA,TP,1.8X3.2MM | 1 | S.A | |
| R928 | 2001-000302 | R-CARBON | 10OHM,5%,1/8W,AA,TP,1.8X3.2MM | 1 | S.A | |
| R114 | 2001-000319 | R-CARBON | 120KOHM,5%,1/8W,AA,TP,1.8X3.2MM | 1 | S.A | |
| R422 | 2001-000331 | R-CARBON | 12KOHM,5%,1/8W,AA,TP,1.8X3.2MM | 1 | S.A | |
| R929 | 2001-000331 | R-CARBON | 12KOHM,5%,1/8W,AA,TP,1.8X3.2MM | 1 | S.A | |
| R911 | 2001-000347 | R-CARBON | 13KOHM,5%,1/8W,AA,TP,1.8X3.2MM | 1 | S.A | |
| R912 | 2001-000347 | R-CARBON | 13KOHM,5%,1/8W,AA,TP,1.8X3.2MM | 1 | S.A | |
| R917 | 2001-000347 | R-CARBON | 13KOHM,5%,1/8W,AA,TP,1.8X3.2MM | 1 | S.A | |
| R264 | 2001-000429 | R-CARBON | 1KOHM,5%,1/8W,AA,TP,1.8X3.2MM | 1 | S.A | |
| R276 | 2001-000429 | R-CARBON | 1KOHM,5%,1/8W,AA,TP,1.8X3.2MM | 1 | S.A | |
| R902 | 2001-000429 | R-CARBON | 1KOHM,5%,1/8W,AA,TP,1.8X3.2MM | 1 | S.A | |
| R913 | 2001-000429 | R-CARBON | 1KOHM,5%,1/8W,AA,TP,1.8X3.2MM | 1 | S.A | |
| R942 | 2001-000429 | R-CARBON | 1KOHM,5%,1/8W,AA,TP,1.8X3.2MM | 1 | S.A | |
| R901 | 2001-000440 | R-CARBON | 1OHM,5%,1/8W,AA,TP,1.8X3.2MM | 1 | S.A | |
| R925 | 2001-000440 | R-CARBON | 1OHM,5%,1/8W,AA,TP,1.8X3.2MM | 1 | S.A | |
| R124 | 2001-000515 | R-CARBON | 220OHM,5%,1/8W,AA,TP,1.8X3.2MM | 1 | S.A | |
| R429 | 2001-000563 | R-CARBON | 27KOHM,5%,1/8W,AA,TP,1.8X3.2MM | 1 | S.A | |
| R163 | 2001-000577 | R-CARBON | 2KOHM,5%,1/8W,AA,TP,1.8X3.2MM | 1 | S.A | |
| R621 | 2001-000577 | R-CARBON | 2KOHM,5%,1/8W,AA,TP,1.8X3.2MM | 1 | S.A | |
| R622 | 2001-000577 | R-CARBON | 2KOHM,5%,1/8W,AA,TP,1.8X3.2MM | 1 | S.A | |
| R924 | 2001-000591 | R-CARBON | 3.3KOHM,5%,1/8W,AA,TP,1.8X3.2MM | 1 | S.A | |
| R926 | 2001-000591 | R-CARBON | 3.3KOHM,5%,1/8W,AA,TP,1.8X3.2MM | 1 | S.A | |
| R205 | 2001-000613 | R-CARBON | 3.9KOHM,5%,1/8W,AA,TP,1.8X3.2MM | 1 | S.A | |
| R113 | 2001-000645 | R-CARBON | 330KOHM,5%,1/8W,AA,TP,1.8X3.2MM | 1 | S.A | |
| R521 | 2001-000679 | R-CARBON | 36KOHM,5%,1/8W,AA,TP,1.8X3.2MM | 1 | S.A | |
| R213 | 2001-000734 | R-CARBON | 4.7KOHM,5%,1/8W,AA,TP,1.8X3.2MM | 1 | S.A | |
| R300 | 2001-000734 | R-CARBON | 4.7KOHM,5%,1/8W,AA,TP,1.8X3.2MM | 1 | S.A | |
| R520 | 2001-000734 | R-CARBON | 4.7KOHM,5%,1/8W,AA,TP,1.8X3.2MM | 1 | S.A | |
| R522 | 2001-000734 | R-CARBON | 4.7KOHM,5%,1/8W,AA,TP,1.8X3.2MM | 1 | S.A | |
| R523 | 2001-000734 | R-CARBON | 4.7KOHM,5%,1/8W,AA,TP,1.8X3.2MM | 1 | S.A | |
| R841 | 2001-000734 | R-CARBON | 4.7KOHM,5%,1/8W,AA,TP,1.8X3.2MM | 1 | S.A | |
| R903 | 2001-000734 | R-CARBON | 4.7KOHM,5%,1/8W,AA,TP,1.8X3.2MM | 1 | S.A | |
| R921 | 2001-000734 | R-CARBON | 4.7KOHM,5%,1/8W,AA,TP,1.8X3.2MM | 1 | S.A | |
| R109 | 2001-000786 | R-CARBON | 47KOHM,5%,1/8W,AA,TP,1.8X3.2MM | 1 | S.A | |
| R427 | 2001-000786 | R-CARBON | 47KOHM,5%,1/8W,AA,TP,1.8X3.2MM | 1 | S.A | |
| R923 | 2001-000786 | R-CARBON | 47KOHM,5%,1/8W,AA,TP,1.8X3.2MM | 1 | S.A | |
| R932 | 2001-000786 | R-CARBON | 47KOHM,5%,1/8W,AA,TP,1.8X3.2MM | 1 | S.A | |
| L202 | 2001-000793 | R-CARBON | 47OHM,5%,1/8W,AA,TP,1.8X3.2MM | 1 | S.A | |
| R706 | 2001-000812 | R-CARBON | 5.6KOHM,5%,1/8W,AA,TP,1.8X3.2MM | 1 | S.A | |
| R707 | 2001-000812 | R-CARBON | 5.6KOHM,5%,1/8W,AA,TP,1.8X3.2MM | 1 | S.A | |
| R708 | 2001-000812 | R-CARBON | 5.6KOHM,5%,1/8W,AA,TP,1.8X3.2MM | 1 | S.A | |
| R709 | 2001-000812 | R-CARBON | 5.6KOHM,5%,1/8W,AA,TP,1.8X3.2MM | 1 | S.A | |
| R719 | 2001-000812 | R-CARBON | 5.6KOHM,5%,1/8W,AA,TP,1.8X3.2MM | 1 | S.A | |
| R720 | 2001-000812 | R-CARBON | 5.6KOHM,5%,1/8W,AA,TP,1.8X3.2MM | 1 | S.A | |
| R721 | 2001-000812 | R-CARBON | 5.6KOHM,5%,1/8W,AA,TP,1.8X3.2MM | 1 | S.A | |
| R722 | 2001-000812 | R-CARBON | 5.6KOHM,5%,1/8W,AA,TP,1.8X3.2MM | 1 | S.A | |
| R916 | 2001-000812 | R-CARBON | 5.6KOHM,5%,1/8W,AA,TP,1.8X3.2MM | 1 | S.A | |
| R606 | 2001-000837 | R-CARBON | 51KOHM,5%,1/8W,AA,TP,1.8X3.2MM | 1 | S.A | |
| R211 | 2001-000857 | R-CARBON | 560OHM,5%,1/8W,AA,TP,1.8X3.2MM | 1 | S.A | |
| R210 | 2001-000878 | R-CARBON | 6.2KOHM,5%,1/8W,AA,TP,1.8X3.2MM | 1 | S.A | |
| R167 | 2001-000924 | R-CARBON | 680OHM,5%,1/8W,AA,TP,1.8X3.2MM | 1 | S.A | |
| R934 | 2001-000924 | R-CARBON | 680OHM,5%,1/8W,AA,TP,1.8X3.2MM | 1 | S.A | |
| R271 | 2001-000938 | R-CARBON | 68OHM,5%,1/8W,AA,TP,1.8X3.2MM | 1 | S.A | |
| R106 | 2001-000947 | R-CARBON | 7.5KOHM,5%,1/8W,AA,TP,1.8X3.2MM | 1 | S.A | |
| R701 | 2001-000969 | R-CARBON | 75OHM,5%,1/8W,AA,TP,1.8X3.2MM | 1 | S.A | |
| R702 | 2001-000969 | R-CARBON | 75OHM,5%,1/8W,AA,TP,1.8X3.2MM | 1 | S.A | |
| R703 | 2001-000969 | R-CARBON | 75OHM,5%,1/8W,AA,TP,1.8X3.2MM | 1 | S.A | |

| Loc.No. | Code No. | Description | Specification | Q'ty | SA/SNA | Remark |
|---|---|---|---|---|---|---|
| R711 | 2001-000969 | R-CARBON | 75OHM,5%,1/8W,AA,TP,1.8X3.2MM | 1 | S.A | |
| R713 | 2001-000969 | R-CARBON | 75OHM,5%,1/8W,AA,TP,1.8X3.2MM | 1 | S.A | |
| R401 | 2001-001072 | R-CARBON(S) | 12OHM,5%,1/2W,AA,TP,2.4X6.4M | 1 | S.A | |
| R829 | 2001-001078 | R-CARBON(S) | 15KOHM,5%,1/2W,AA,TP,2.4X6.4 | 1 | S.A | |
| R830 | 2001-001078 | R-CARBON(S) | 15KOHM,5%,1/2W,AA,TP,2.4X6.4 | 1 | S.A | |
| R831 | 2001-001078 | R-CARBON(S) | 15KOHM,5%,1/2W,AA,TP,2.4X6.4 | 1 | S.A | |
| R805 | 2001-001088 | R-CARBON(S) | 1KOHM,5%,1/2W,AA,TP,2.4X6.4M | 1 | S.A | |
| R817 | 2001-001088 | R-CARBON(S) | 1KOHM,5%,1/2W,AA,TP,2.4X6.4M | 1 | S.A | |
| R820 | 2001-001088 | R-CARBON(S) | 1KOHM,5%,1/2W,AA,TP,2.4X6.4M | 1 | S.A | |
| R810 | 2001-001097 | R-CARBON(S) | 2.4KOHM,5%,1/2W,AA,TP,2.4X6. | 1 | S.A | |
| R404 | 2001-001114 | R-CARBON(S) | 270OHM,5%,1/2W,AA,TP,2.4X6.4 | 1 | S.A | |
| R410 | 2001-001115 | R-CARBON(S) | 27KOHM,5%,1/2W,AA,TP,2.4X6.4 | 1 | S.A | |
| R818 | 2001-001131 | R-CARBON(S) | 33KOHM,5%,1/2W,AA,TP,2.4X6.4 | 1 | S.A | |
| R826 | 2001-001131 | R-CARBON(S) | 33KOHM,5%,1/2W,AA,TP,2.4X6.4 | 1 | S.A | |
| R836 | 2001-001138 | R-CARBON(S) | 390OHM,5%,1/2W,AA,TP,2.4X6.4 | 1 | S.A | |
| R808 | 2001-001150 | R-CARBON(S) | 470KOHM,5%,1/2W,AA,TP,2.4X6. | 1 | S.A | |
| R809 | 2001-001150 | R-CARBON(S) | 470KOHM,5%,1/2W,AA,TP,2.4X6. | 1 | S.A | |
| R895 | 2001-001152 | R-CARBON(S) | 47KOHM,5%,1/2W,AA,TP,2.4X6.4 | 1 | S.A | |
| R402 | 2001-001153 | R-CARBON(S) | 47ohm,5%,1/2W,AA,TP,2.4x6.4m | 1 | S.A | |
| R409 | 2001-001168 | R-CARBON(S) | 6.8KOHM,5%,1/2W,AA,TP,2.4X6. | 1 | S.A | |
| ⚠ RX801S | 2002-000133 | R-COMPOSITION | 3.3Mohm,5%,1/2W,AA,TP,3.5x | 1 | S.A | |
| ⚠ RY801S | 2002-001012 | R-COMPOSITION | 8.2Mohm,5%,1/2W,AA,TP,3.7x | 1 | S.A | |
| R802 | 2003-000586 | R-METAL OXIDE(S) | 22Kohm,5%,2W,AF,TP,4x12 | 1 | S.A | |
| R803 | 2003-000586 | R-METAL OXIDE(S) | 22Kohm,5%,2W,AF,TP,4x12 | 1 | S.A | |
| R804 | 2003-000586 | R-METAL OXIDE(S) | 22Kohm,5%,2W,AF,TP,4x12 | 1 | S.A | |
| R423 | 2003-001042 | R-METAL OXIDE(S) | 5.6Kohm,5%,2W,AF,TP,3.9 | 1 | S.A | |
| R823 | 2003-002020 | R-METAL OXIDE(S) | 56Kohm,5%,2W,AF,TP,3.9x | 1 | S.A | |
| R303 | 2003-002070 | R-METAL OXIDE | 1ohm,5%,2W,AF,TP,3.9x10mm | 1 | S.A | |
| R407 | 2003-002193 | R-METAL OXIDE(S) | 33Kohm,5%,2W,AG,TP,3.9X | 1 | S.A | |
| R309 | 2003-002205 | R-METAL OXIDE(S) | 330ohm,5%,2W,AG,TP,3.9X | 1 | S.A | |
| R310 | 2003-002205 | R-METAL OXIDE(S) | 330ohm,5%,2W,AG,TP,3.9X | 1 | S.A | |
| R426 | 2003-002288 | R-METAL OXIDE(S) | 2.2KOHM,5%,2W,AF,TP,3.9 | 1 | S.A | |
| R425 | 2004-000433 | R-METAL | 1Kohm,1%,1/8W,AA,TP,1.8x3.2mm | 1 | S.A | |
| R411 | 2004-001099 | R-METAL | 56Kohm,1%,1/4W,AA,TP,2.4x6.4mm | 1 | S.A | |
| R305 | 2004-001371 | R-METAL(S) | 1.5Kohm,1%,1/2W,AA,TP,2.4x6.4 | 1 | S.A | |
| R408 | 2004-001390 | R-METAL(S) | 1Kohm,2%,1/2W,AA,TP,2.4x6.4mm | 1 | S.A | |
| R816 | 2004-001891 | R-METAL(S) | 133Kohm,1%,1/2W,AA,TP,2.5x6.5 | 1 | S.A | |
| R169 | 2004-001914 | R-METAL | 39Kohm,2%,1/8W,AA,TP,1.8x3.5mm | 1 | S.A | |
| R819 | 2004-001983 | R-METAL(S) | 2.49Kohm,1%,1/2W,AA,TP,2.4x6. | 1 | S.A | |
| R821 | 2004-004089 | R-METAL(S) | 123Kohm,1%,1/2W,AA,TP,2.5x6.5 | 1 | S.A | |
| R302 | 2004-004097 | R-METAL | 1.6Kohm,2%,1/2W,AA,TP,2.4X6.4mm | 1 | S.A | |
| R413 | 2008-000253 | R-FUSIBLE(S) | 0.47ohm,5%,1W,AF,TP,3.9x10m | 1 | S.A | |
| R414 | 2008-000264 | R-FUSIBLE(S) | 1ohm,5%,1W,AF,TP,3.9x10mm | 1 | S.A | |
| R304 | 2008-001015 | R-FUSIBLE(S) | 1.5ohm,5%,2W,AF,TP,3.9x10mm | 1 | S.A | |
| R418 | 2008-001135 | R-FUSIBLE(S) | 3.9ohm,5%,1W,AF,TP,3.9x10mm | 1 | S.A | |
| R450 | 2008-001135 | R-FUSIBLE(S) | 3.9ohm,5%,1W,AF,TP,3.9x10mm | 1 | S.A | |
| C306 | 2201-000003 | C-CERAMIC,DISC | 0.068NF,10%,2KV,SL,TP,7X5 | 1 | S.A | |
| C424 | 2201-000132 | C-CERAMIC,DISC | 0.1NF,10%,500V,Y5P,TP,6.5 | 1 | S.A | |
| C302 | 2201-000192 | C-CERAMIC,DISC | 0.01nF,0.25pF,500V,C0G,-, | 1 | S.A | |
| C823 | 2201-000291 | C-CERAMIC,DISC | 1NF,10%,500V,Y5P,TP,7.5X3 | 1 | S.A | |
| C828 | 2201-000374 | C-CERAMIC,DISC | 0.22NF,5%,50V,C0G,TP,10.5 | 1 | S.A | |
| C820 | 2201-000406 | C-CERAMIC,DISC | 0.27NF,10%,2KV,Y5P,TP,6.3 | 1 | S.A | |
| C408 | 2201-000556 | C-CERAMIC,DISC | 0.47NF,10%,500V,Y5P,TP,5. | 1 | S.A | |
| C411 | 2201-000556 | C-CERAMIC,DISC | 0.47NF,10%,500V,Y5P,TP,5. | 1 | S.A | |
| C413 | 2201-000556 | C-CERAMIC,DISC | 0.47NF,10%,500V,Y5P,TP,5. | 1 | S.A | |
| C818 | 2201-000556 | C-CERAMIC,DISC | 0.47NF,10%,500V,Y5P,TP,5. | 1 | S.A | |
| C888 | 2201-000556 | C-CERAMIC,DISC | 0.47NF,10%,500V,Y5P,TP,5. | 1 | S.A | |
| C403 | 2201-000599 | C-CERAMIC,DISC | 0.56NF,10%,500V,Y5P,TP,5. | 1 | S.A | |
| C845 | 2201-000599 | C-CERAMIC,DISC | 0.56NF,10%,500V,Y5P,TP,5. | 1 | S.A | |
| C703 | 2202-000121 | C-CERAMIC,MLC-AXIAL | 0.1nF,10%,50V,Y5P,-, | 1 | S.A | |
| C704 | 2202-000121 | C-CERAMIC,MLC-AXIAL | 0.1nF,10%,50V,Y5P,-, | 1 | S.A | |
| C705 | 2202-000121 | C-CERAMIC,MLC-AXIAL | 0.1nF,10%,50V,Y5P,-, | 1 | S.A | |
| C117 | 2202-000127 | C-CERAMIC,MLC-AXIAL | 10nF,+80-20%,25V,Y5V | 1 | S.A | |
| C120 | 2202-000127 | C-CERAMIC,MLC-AXIAL | 10nF,+80-20%,25V,Y5V | 1 | S.A | |
| C143 | 2202-000222 | C-CERAMIC,MLC-AXIAL | 3.3nF,20%,16V,Y5P,TP | 1 | S.A | |
| C607 | 2202-000231 | C-CERAMIC,MLC-AXIAL | 0.33NF,10%,50V,Y5P,T | 1 | S.A | |
| C608 | 2202-000231 | C-CERAMIC,MLC-AXIAL | 0.33NF,10%,50V,Y5P,T | 1 | S.A | |
| C627 | 2202-000231 | C-CERAMIC,MLC-AXIAL | 0.33NF,10%,50V,Y5P,T | 1 | S.A | |
| C629 | 2202-000231 | C-CERAMIC,MLC-AXIAL | 0.33NF,10%,50V,Y5P,T | 1 | S.A | |
| C638 | 2202-000231 | C-CERAMIC,MLC-AXIAL | 0.33NF,10%,50V,Y5P,T | 1 | S.A | |
| C642 | 2202-000231 | C-CERAMIC,MLC-AXIAL | 0.33NF,10%,50V,Y5P,T | 1 | S.A | |
| C643 | 2202-000231 | C-CERAMIC,MLC-AXIAL | 0.33NF,10%,50V,Y5P,T | 1 | S.A | |
| C644 | 2202-000231 | C-CERAMIC,MLC-AXIAL | 0.33NF,10%,50V,Y5P,T | 1 | S.A | |
| C312 | 2202-000796 | C-CERAMIC,MLC-AXIAL | 1NF,10%,50V,Y5P,TP,3 | 1 | S.A | |
| C313 | 2202-000796 | C-CERAMIC,MLC-AXIAL | 1NF,10%,50V,Y5P,TP,3 | 1 | S.A | |
| C417 | 2202-000796 | C-CERAMIC,MLC-AXIAL | 1NF,10%,50V,Y5P,TP,3 | 1 | S.A | |
| C902 | 2202-000796 | C-CERAMIC,MLC-AXIAL | 1NF,10%,50V,Y5P,TP,3 | 1 | S.A | |

| Loc.No. | Code No. | Description | Specification | Q'ty | SA/SNA | Remark |
|---|---|---|---|---|---|---|
| C144 | 2202-000807 | C-CERAMIC,MLC-AXIAL | 22nF,+80-20%,25V,Y5V | 1 | S.A | |
| C147 | 2202-000807 | C-CERAMIC,MLC-AXIAL | 22nF,+80-20%,25V,Y5V | 1 | S.A | |
| C101 | 2202-002037 | C-CERAMIC,MLC-AXIAL | 100nF,80-20%,50V,Y5V | 1 | S.A | |
| C103 | 2202-002037 | C-CERAMIC,MLC-AXIAL | 100nF,80-20%,50V,Y5V | 1 | S.A | |
| C107 | 2202-002037 | C-CERAMIC,MLC-AXIAL | 100nF,80-20%,50V,Y5V | 1 | S.A | |
| C110 | 2202-002037 | C-CERAMIC,MLC-AXIAL | 100nF,80-20%,50V,Y5V | 1 | S.A | |
| C125 | 2202-002037 | C-CERAMIC,MLC-AXIAL | 100nF,80-20%,50V,Y5V | 1 | S.A | |
| C130 | 2202-002037 | C-CERAMIC,MLC-AXIAL | 100nF,80-20%,50V,Y5V | 1 | S.A | |
| C131 | 2202-002037 | C-CERAMIC,MLC-AXIAL | 100nF,80-20%,50V,Y5V | 1 | S.A | |
| C132 | 2202-002037 | C-CERAMIC,MLC-AXIAL | 100nF,80-20%,50V,Y5V | 1 | S.A | |
| C204 | 2202-002037 | C-CERAMIC,MLC-AXIAL | 100nF,80-20%,50V,Y5V | 1 | S.A | |
| C205 | 2202-002037 | C-CERAMIC,MLC-AXIAL | 100nF,80-20%,50V,Y5V | 1 | S.A | |
| C219 | 2202-002037 | C-CERAMIC,MLC-AXIAL | 100nF,80-20%,50V,Y5V | 1 | S.A | |
| C713 | 2202-002037 | C-CERAMIC,MLC-AXIAL | 100nF,80-20%,50V,Y5V | 1 | S.A | |
| C715 | 2202-002037 | C-CERAMIC,MLC-AXIAL | 100nF,80-20%,50V,Y5V | 1 | S.A | |
| C717 | 2202-002037 | C-CERAMIC,MLC-AXIAL | 100nF,80-20%,50V,Y5V | 1 | S.A | |
| C719 | 2202-002037 | C-CERAMIC,MLC-AXIAL | 100nF,80-20%,50V,Y5V | 1 | S.A | |
| C725 | 2202-002037 | C-CERAMIC,MLC-AXIAL | 100nF,80-20%,50V,Y5V | 1 | S.A | |
| C904 | 2202-002037 | C-CERAMIC,MLC-AXIAL | 100nF,80-20%,50V,Y5V | 1 | S.A | |
| C907 | 2202-002037 | C-CERAMIC,MLC-AXIAL | 100nF,80-20%,50V,Y5V | 1 | S.A | |
| C909 | 2202-002037 | C-CERAMIC,MLC-AXIAL | 100nF,80-20%,50V,Y5V | 1 | S.A | |
| C911 | 2202-002037 | C-CERAMIC,MLC-AXIAL | 100nF,80-20%,50V,Y5V | 1 | S.A | |
| C913 | 2202-002037 | C-CERAMIC,MLC-AXIAL | 100nF,80-20%,50V,Y5V | 1 | S.A | |
| C914 | 2202-002037 | C-CERAMIC,MLC-AXIAL | 100nF,80-20%,50V,Y5V | 1 | S.A | |
| C916 | 2202-002037 | C-CERAMIC,MLC-AXIAL | 100nF,80-20%,50V,Y5V | 1 | S.A | |
| C917 | 2202-002037 | C-CERAMIC,MLC-AXIAL | 100nF,80-20%,50V,Y5V | 1 | S.A | |
| C920 | 2202-002037 | C-CERAMIC,MLC-AXIAL | 100nF,80-20%,50V,Y5V | 1 | S.A | |
| C924 | 2202-002037 | C-CERAMIC,MLC-AXIAL | 100nF,80-20%,50V,Y5V | 1 | S.A | |
| C926 | 2202-002037 | C-CERAMIC,MLC-AXIAL | 100nF,80-20%,50V,Y5V | 1 | S.A | |
| C931 | 2202-002037 | C-CERAMIC,MLC-AXIAL | 100nF,80-20%,50V,Y5V | 1 | S.A | |
| C610 | 2301-000289 | C-FILM,LEAD-PEF | 5.6nF,5%,50V,TP,7x6x3mm, | 1 | S.A | |
| C611 | 2301-000289 | C-FILM,LEAD-PEF | 5.6nF,5%,50V,TP,7x6x3mm, | 1 | S.A | |
| C929 | 2301-000301 | C-FILM,LEAD-PEF | 6.8nF,5%,50V,TP,6.5X5.5X | 1 | S.A | |
| C301 | 2301-000342 | C-FILM,LEAD-PEF | 2.2nF,5%,50V,TP,7.4x3.9x | 1 | S.A | |
| C809 | 2301-000342 | C-FILM,LEAD-PEF | 2.2nF,5%,50V,TP,7.4x3.9x | 1 | S.A | |
| C844 | 2301-000356 | C-FILM,LEAD-PEF | 47nF,5%,50V,TP,7.5x4.0x6 | 1 | S.A | |
| C401 | 2301-000383 | C-FILM,LEAD-PEF | 10nF,5%,50V,TP,6x7x3.2mm | 1 | S.A | |
| C618 | 2301-000383 | C-FILM,LEAD-PEF | 10nF,5%,50V,TP,6x7x3.2mm | 1 | S.A | |
| C801 | 2301-000383 | C-FILM,LEAD-PEF | 10nF,5%,50V,TP,6x7x3.2mm | 1 | S.A | |
| C810 | 2301-000383 | C-FILM,LEAD-PEF | 10nF,5%,50V,TP,6x7x3.2mm | 1 | S.A | |
| C928 | 2301-000383 | C-FILM,LEAD-PEF | 10nF,5%,50V,TP,6x7x3.2mm | 1 | S.A | |
| C415 | 2301-001067 | C-FILM,LEAD-PPF | 82nF,5%,400V,TP,19x15.5x | 1 | S.A | |
| C414 | 2301-001083 | C-FILM,LEAD-PPF | 27nF,5%,400V,TP,20x7.5x1 | 1 | S.A | |
| C807 | 2301-001342 | C-FILM,LEAD-PPF | 1.5nF,5%,800V,TP,15x6.5x | 1 | S.A | |
| C499 | 2305-000237 | C-FILM,LEAD-PEF | 1uF,5%,63V,TP,7.5x15.5mm | 1 | S.A | |
| C305 | 2305-000285 | C-FILM,LEAD-PEF | 220NF,5%,100V,TP,10.5X5. | 1 | S.A | |
| C148 | 2305-000289 | C-FILM,LEAD-PEF | 220nF,5%,63V,TP,-,5mm | 1 | S.A | |
| C824 | 2305-000289 | C-FILM,LEAD-PEF | 220nF,5%,63V,TP,-,5mm | 1 | S.A | |
| C404 | 2305-000382 | C-FILM,LEAD-PEF | 4.7nF,5%,400V,TP,-,5mm | 1 | S.A | |
| C133 | 2305-000665 | C-FILM,LEAD-PEF | 100nF,5%,63V,TP,7.5x4.0x | 1 | S.A | |
| C140 | 2305-000665 | C-FILM,LEAD-PEF | 100nF,5%,63V,TP,7.5x4.0x | 1 | S.A | |
| C212 | 2305-000665 | C-FILM,LEAD-PEF | 100nF,5%,63V,TP,7.5x4.0x | 1 | S.A | |
| C620 | 2305-000665 | C-FILM,LEAD-PEF | 100nF,5%,63V,TP,7.5x4.0x | 1 | S.A | |
| C145 | 2306-000134 | C-FILM,LEAD-PPF | 150nF,5%,400V,TP,19x17x1 | 1 | S.A | |
| C821 | 2401-000262 | C-AL | 100uF,20%,160V,HR,TP,16x25,7.5 | 1 | S.A | |
| C402 | 2401-000302 | C-AL | 100uF,20%,25V,GP,TP,6.3x11,5 | 1 | S.A | |
| C303 | 2401-000360 | C-AL | 100uF,20%,50V,GP,TP,8x11.5,5 | 1 | S.A | |
| C304 | 2401-000365 | C-AL | 100uF,20%,50V,WT,TP,10x12.5mm, | 1 | S.A | |
| C108 | 2401-000480 | C-AL | 10uF,20%,50V,GP,TP,5x11,5 | 1 | S.A | |
| C146 | 2401-000480 | C-AL | 10uF,20%,50V,GP,TP,5x11,5 | 1 | S.A | |
| C206 | 2401-000480 | C-AL | 10uF,20%,50V,GP,TP,5x11,5 | 1 | S.A | |
| C218 | 2401-000480 | C-AL | 10uF,20%,50V,GP,TP,5x11,5 | 1 | S.A | |
| C906 | 2401-000480 | C-AL | 10uF,20%,50V,GP,TP,5x11,5 | 1 | S.A | |
| C912 | 2401-000480 | C-AL | 10uF,20%,50V,GP,TP,5x11,5 | 1 | S.A | |
| C925 | 2401-000493 | C-AL | 10uF,20%,50V,LZ,TP,5x11mm,5mm | 1 | S.A | |
| C511 | 2401-000553 | C-AL | 1uF,10%,50V,GP,TP,5x11,5 | 1 | S.A | |
| C930 | 2401-000553 | C-AL | 1uF,10%,50V,GP,TP,5x11,5 | 1 | S.A | |
| C612 | 2401-000649 | C-AL | 2.2uF,20%,50V,BP,TP,5x11,5 | 1 | S.A | |
| C613 | 2401-000649 | C-AL | 2.2uF,20%,50V,BP,TP,5x11,5 | 1 | S.A | |
| C137 | 2401-000660 | C-AL | 2.2uF,20%,50V,GP,TP,5x11,5 | 1 | S.A | |
| C139 | 2401-000660 | C-AL | 2.2uF,20%,50V,GP,TP,5x11,5 | 1 | S.A | |
| C721 | 2401-000660 | C-AL | 2.2uF,20%,50V,GP,TP,5x11,5 | 1 | S.A | |
| C722 | 2401-000660 | C-AL | 2.2uF,20%,50V,GP,TP,5x11,5 | 1 | S.A | |
| C846 | 2401-000698 | C-AL | 2200uF,20%,16V,WT,TP,12.5x25,5 | 1 | S.A | |
| C817 | 2401-000703 | C-AL | 2200uF,20%,25V,GP,-,12.5x25mm, | 1 | S.A | |
| C104 | 2401-000913 | C-AL | 22uF,20%,16V,GP,TP,5x11,5 | 1 | S.A | |
| C202 | 2401-000913 | C-AL | 22uF,20%,16V,GP,TP,5x11,5 | 1 | S.A | |

| Loc.No. | Code No. | Description | Specification | Q'ty | SA/SNA | Remark |
|---|---|---|---|---|---|---|
| C409 | 2401-001397 | C-AL | 470uF,20%,25V,GP,TP,10x16,5 | 1 | S.A | |
| C412 | 2401-001527 | C-AL | 47uF,20%,250V,HR,TP,13x25mm,5m | 1 | S.A | |
| C601 | 2401-001914 | C-AL | 1uF,20%,50V,BP,TP,5x11,5 | 1 | S.A | |
| C602 | 2401-001914 | C-AL | 1uF,20%,50V,BP,TP,5x11,5 | 1 | S.A | |
| C621 | 2401-001998 | C-AL | 1000uF,20%,25V,GP,TP,10x20,5mm | 1 | S.A | |
| C819 | 2401-001998 | C-AL | 1000uF,20%,25V,GP,TP,10x20,5mm | 1 | S.A | |
| C812 | 2401-002075 | C-AL | 4.7uF,20%,50V,GP,TP,5x11,5 | 1 | S.A | |
| C901 | 2401-002144 | C-AL | 47uF,20%,16V,GP,TP,5x11,5 | 1 | S.A | |
| C407 | 2401-002268 | C-AL | 2.2uF,20%,250V,LZ,TP,8X11,5 | 1 | S.A | |
| C410 | 2401-002288 | C-AL | 470uF,20%,25V,WT,TP,10x20,5 | 1 | S.A | |
| C811 | 2401-002463 | C-AL | 470uF,20%,16V,GP,TP,8x11.5,5 | 1 | S.A | |
| C905 | 2401-002463 | C-AL | 470uF,20%,16V,GP,TP,8x11.5,5 | 1 | S.A | |
| C109 | 2401-003036 | C-AL | 100uF,20%,16V,GP,TP,5X11mm,5mm | 1 | S.A | |
| C903 | 2401-003036 | C-AL | 100uF,20%,16V,GP,TP,5X11mm,5mm | 1 | S.A | |
| C915 | 2401-003036 | C-AL | 100uF,20%,16V,GP,TP,5X11mm,5mm | 1 | S.A | |
| C918 | 2401-003036 | C-AL | 100uF,20%,16V,GP,TP,5X11mm,5mm | 1 | S.A | |
| C919 | 2401-003036 | C-AL | 100uF,20%,16V,GP,TP,5X11mm,5mm | 1 | S.A | |
| C921 | 2401-003036 | C-AL | 100uF,20%,16V,GP,TP,5X11mm,5mm | 1 | S.A | |
| C927 | 2401-003036 | C-AL | 100uF,20%,16V,GP,TP,5X11mm,5mm | 1 | S.A | |
| C808 | 2401-003046 | C-AL | 47uF,20%,50V,WT,TP,6.3x11,2.5 | 1 | S.A | |
| C822 | 2401-003058 | C-AL | 100uF,20%,200V,WT,TP,16x25,7.5 | 1 | S.A | |
| C815 | 2401-003224 | C-AL | 470uF,20%,16V,WT,TP,8X11.5,5mm | 1 | S.A | |
| C102 | 2401-003578 | C-AL | 1000uF,20%,10V,GP,TP,8x20mm,5 | 1 | S.A | |
| C922 | 2401-003578 | C-AL | 1000uF,20%,10V,GP,TP,8x20mm,5 | 1 | S.A | |
| L101 | 2701-000114 | INDUCTOR-AXIAL | 10UH,10%,2534 | 1 | S.A | |
| L102 | 2701-000114 | INDUCTOR-AXIAL | 10UH,10%,2534 | 1 | S.A | |
| L201 | 2701-000114 | INDUCTOR-AXIAL | 10UH,10%,2534 | 1 | S.A | |
| L204 | 2701-000114 | INDUCTOR-AXIAL | 10UH,10%,2534 | 1 | S.A | |
| L902 | 2701-000114 | INDUCTOR-AXIAL | 10UH,10%,2534 | 1 | S.A | |
| L903 | 2701-000114 | INDUCTOR-AXIAL | 10UH,10%,2534 | 1 | S.A | |
| L906 | 2701-000114 | INDUCTOR-AXIAL | 10UH,10%,2534 | 1 | S.A | |
| L907 | 2701-000114 | INDUCTOR-AXIAL | 10UH,10%,2534 | 1 | S.A | |
| L908 | 2701-000114 | INDUCTOR-AXIAL | 10UH,10%,2534 | 1 | S.A | |
| L909 | 2701-000114 | INDUCTOR-AXIAL | 10UH,10%,2534 | 1 | S.A | |
| L910 | 2701-000114 | INDUCTOR-AXIAL | 10UH,10%,2534 | 1 | S.A | |
| L911 | 2701-000114 | INDUCTOR-AXIAL | 10UH,10%,2534 | 1 | S.A | |
| L424 | 2701-000142 | INDUCTOR-AXIAL | 1UH,10%,2534 | 1 | S.A | |
| L703 | 2701-000142 | INDUCTOR-AXIAL | 1UH,10%,2534 | 1 | S.A | |
| L704 | 2701-000142 | INDUCTOR-AXIAL | 1UH,10%,2534 | 1 | S.A | |
| L707 | 2701-000142 | INDUCTOR-AXIAL | 1UH,10%,2534 | 1 | S.A | |
| L107 | 2701-000159 | INDUCTOR-AXIAL | 22UH,10%,4298 | 1 | S.A | |
| L607 | 2701-000177 | INDUCTOR-AXIAL | 33UH,10%,2534 | 1 | S.A | |
| L608 | 2701-000177 | INDUCTOR-AXIAL | 33UH,10%,2534 | 1 | S.A | |
| L705 | 2701-000177 | INDUCTOR-AXIAL | 33UH,10%,2534 | 1 | S.A | |
| L706 | 2701-000177 | INDUCTOR-AXIAL | 33UH,10%,2534 | 1 | S.A | |
| L808 | 2701-001030 | INDUCTOR-AXIAL | 43UH,10%,4514 | 1 | S.A | |
| L303B | 2701-001034 | INDUCTOR-AXIAL | 22UH,10%,4514 | 1 | S.A | |
| F101 | 2901-000297 | FILTER-EMI ON BOARD | -,3A,-,-,3.5x5,TP,- | 1 | S.A | |
| F101 | 2901-000297 | FILTER-EMI ON BOARD | -,3A,-,-,3.5x5,TP,- | 1 | S.A | |
| F101 | 2901-000297 | FILTER-EMI ON BOARD | -,3A,-,-,3.5x5,TP,- | 1 | S.A | |
| L2514 | 3301-000287 | BEAD-AXIAL | ,3.5x1.0x6.0mm,3000mA,TP,,,50 | 1 | S.N.A | |
| L2514 | 3301-000287 | BEAD-AXIAL | ,3.5x1.0x6.0mm,3000mA,TP,,,50 | 1 | S.N.A | |
| L2514 | 3301-000287 | BEAD-AXIAL | ,3.5x1.0x6.0mm,3000mA,TP,,,50 | 1 | S.N.A | |
| L2514 | 3301-000287 | BEAD-AXIAL | ,3.5x1.0x6.0mm,3000mA,TP,,,50 | 1 | S.N.A | |
| L2514 | 3301-000287 | BEAD-AXIAL | ,3.5x1.0x6.0mm,3000mA,TP,,,50 | 1 | S.N.A | |
| L2514 | 3301-000287 | BEAD-AXIAL | ,3.5x1.0x6.0mm,3000mA,TP,,,50 | 1 | S.N.A | |
| L2514 | 3301-000287 | BEAD-AXIAL | ,3.5x1.0x6.0mm,3000mA,TP,,,50 | 1 | S.N.A | |
| L2514 | 3301-000287 | BEAD-AXIAL | ,3.5x1.0x6.0mm,3000mA,TP,,,50 | 1 | S.N.A | |
| SW901 | 3404-001252 | SWITCH-TACT | 12VDC,50MA,130GF,7.5X7.1,1 | 1 | S.A | |
| SW902 | 3404-001252 | SWITCH-TACT | 12VDC,50MA,130GF,7.5X7.1,1 | 1 | S.A | |
| SW903 | 3404-001252 | SWITCH-TACT | 12VDC,50MA,130GF,7.5X7.1,1 | 1 | S.A | |
| SW904 | 3404-001252 | SWITCH-TACT | 12VDC,50MA,130GF,7.5X7.1,1 | 1 | S.A | |
| SW905 | 3404-001252 | SWITCH-TACT | 12VDC,50MA,130GF,7.5X7.1,1 | 1 | S.A | |
| FD801A | 3601-001163 | FUSE-AXIAL LEAD | 125V,7A,-,EPOXY,2.4X7.1M | 1 | S.A | |
| ⚠ FD802S | 3601-001163 | FUSE-AXIAL LEAD | 125V,7A,-,EPOXY,2.4X7.1M | 1 | S.A | |
| F801A | 3602-000001 | FUSE-CLIP | -,-,30mohm | 1 | S.A | |
| F801B | 3602-000001 | FUSE-CLIP | -,-,30mohm | 1 | S.A | |
| EL801 | 6042-000001 | EYELET | ID2.2,OD2.7,L3.1,NI+SN,BSP3-1/2H | 1 | S.N.A | |
| EL802 | 6042-000001 | EYELET | ID2.2,OD2.7,L3.1,NI+SN,BSP3-1/2H | 1 | S.N.A | |
| EL803 | 6042-000001 | EYELET | ID2.2,OD2.7,L3.1,NI+SN,BSP3-1/2H | 1 | S.N.A | |
| EL804 | 6042-000001 | EYELET | ID2.2,OD2.7,L3.1,NI+SN,BSP3-1/2H | 1 | S.N.A | |
| EL805 | 6042-000001 | EYELET | ID2.2,OD2.7,L3.1,NI+SN,BSP3-1/2H | 1 | S.N.A | |
| EL806 | 6042-000001 | EYELET | ID2.2,OD2.7,L3.1,NI+SN,BSP3-1/2H | 1 | S.N.A | |
| EL807 | 6042-000001 | EYELET | ID2.2,OD2.7,L3.1,NI+SN,BSP3-1/2H | 1 | S.N.A | |
| EL808 | 6042-000001 | EYELET | ID2.2,OD2.7,L3.1,NI+SN,BSP3-1/2H | 1 | S.N.A | |
| EL844 | 6042-000001 | EYELET | ID2.2,OD2.7,L3.1,NI+SN,BSP3-1/2H | 1 | S.N.A | |
| EL845 | 6042-000001 | EYELET | ID2.2,OD2.7,L3.1,NI+SN,BSP3-1/2H | 1 | S.N.A | |

| Loc.No. | Code No. | Description | Specification | Q'ty | SA/SNA | Remark |
|---|---|---|---|---|---|---|
| EY600 | 6042-000002 | EYELET | ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H | 1 | S.A | |
| EY601 | 6042-000002 | EYELET | ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H | 1 | S.A | |
| EY602 | 6042-000002 | EYELET | ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H | 1 | S.A | |
| EY603 | 6042-000002 | EYELET | ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H | 1 | S.A | |
| EY801 | 6042-000002 | EYELET | ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H | 1 | S.A | |
| EY802 | 6042-000002 | EYELET | ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H | 1 | S.A | |
| EY803 | 6042-000002 | EYELET | ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H | 1 | S.A | |
| EY804 | 6042-000002 | EYELET | ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H | 1 | S.A | |
| EY805 | 6042-000002 | EYELET | ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H | 1 | S.A | |
| EY807 | 6042-000002 | EYELET | ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H | 1 | S.A | |
| EY810 | 6042-000002 | EYELET | ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H | 1 | S.A | |
| EY838 | 6042-000002 | EYELET | ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H | 1 | S.A | |
| EY839 | 6042-000002 | EYELET | ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H | 1 | S.A | |
| EY840 | 6042-000002 | EYELET | ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H | 1 | S.A | |
| EY841 | 6042-000002 | EYELET | ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H | 1 | S.A | |
| EY842 | 6042-000002 | EYELET | ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H | 1 | S.A | |
| EY843 | 6042-000002 | EYELET | ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H | 1 | S.A | |
| EY846 | 6042-000002 | EYELET | ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H | 1 | S.A | |
| EY847 | 6042-000002 | EYELET | ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H | 1 | S.A | |
| EY848 | 6042-000002 | EYELET | ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H | 1 | S.A | |
| EY849 | 6042-000002 | EYELET | ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H | 1 | S.A | |
| EY850 | 6042-000002 | EYELET | ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H | 1 | S.A | |
| EY851 | 6042-000002 | EYELET | ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H | 1 | S.A | |
| EY852 | 6042-000002 | EYELET | ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H | 1 | S.A | |
| EY853 | 6042-000002 | EYELET | ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H | 1 | S.A | |
| EY854 | 6042-000002 | EYELET | ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H | 1 | S.A | |
| EY855 | 6042-000002 | EYELET | ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H | 1 | S.A | |
| EY856 | 6042-000002 | EYELET | ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H | 1 | S.A | |
| EY858 | 6042-000002 | EYELET | ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H | 1 | S.A | |
| EY859 | 6042-000002 | EYELET | ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H | 1 | S.A | |
| EY861 | 6042-000002 | EYELET | ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H | 1 | S.A | |
| EY862 | 6042-000002 | EYELET | ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H | 1 | S.A | |
| EY863 | 6042-000002 | EYELET | ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H | 1 | S.A | |
| EY864 | 6042-000002 | EYELET | ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H | 1 | S.A | |
| EY865 | 6042-000002 | EYELET | ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H | 1 | S.A | |
| EY866 | 6042-000002 | EYELET | ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H | 1 | S.A | |
| EY867 | 6042-000002 | EYELET | ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H | 1 | S.A | |
| EY868 | 6042-000002 | EYELET | ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H | 1 | S.A | |
| EY869 | 6042-000002 | EYELET | ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H | 1 | S.A | |
| EY870 | 6042-000002 | EYELET | ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H | 1 | S.A | |
| EY871 | 6042-000002 | EYELET | ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H | 1 | S.A | |
| EY872 | 6042-000002 | EYELET | ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H | 1 | S.A | |
| EY873 | 6042-000002 | EYELET | ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H | 1 | S.A | |
| EY874 | 6042-000002 | EYELET | ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H | 1 | S.A | |
| EY875 | 6042-000002 | EYELET | ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H | 1 | S.A | |
| EY876 | 6042-000002 | EYELET | ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H | 1 | S.A | |
| EY877 | 6042-000002 | EYELET | ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H | 1 | S.A | |
| EY878 | 6042-000002 | EYELET | ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H | 1 | S.A | |
| EY879 | 6042-000002 | EYELET | ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H | 1 | S.A | |
| EY880 | 6042-000002 | EYELET | ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H | 1 | S.A | |
| EY881 | 6042-000002 | EYELET | ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H | 1 | S.A | |
| EY882 | 6042-000002 | EYELET | ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H | 1 | S.A | |
| EY883 | 6042-000002 | EYELET | ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H | 1 | S.A | |
| EY884 | 6042-000002 | EYELET | ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H | 1 | S.A | |
| EY885 | 6042-000002 | EYELET | ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H | 1 | S.A | |
| EY886 | 6042-000002 | EYELET | ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H | 1 | S.A | |
| EY887 | 6042-000002 | EYELET | ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H | 1 | S.A | |
| EY888 | 6042-000002 | EYELET | ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H | 1 | S.A | |
| EY889 | 6042-000002 | EYELET | ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H | 1 | S.A | |
| EY890 | 6042-000002 | EYELET | ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H | 1 | S.A | |
| EY891 | 6042-000002 | EYELET | ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H | 1 | S.A | |
| EY892 | 6042-000002 | EYELET | ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H | 1 | S.A | |
| EY894 | 6042-000002 | EYELET | ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H | 1 | S.A | |
| EY895 | 6042-000002 | EYELET | ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H | 1 | S.A | |
| EY896 | 6042-000002 | EYELET | ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H | 1 | S.A | |
| EY897 | 6042-000002 | EYELET | ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H | 1 | S.A | |
| EY898 | 6042-000002 | EYELET | ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H | 1 | S.A | |
| CN909 | AA37-00001A | CONNECTOR-FBT FIX PIN | JM-3500,CPTTV,0.36 | 1 | S.A | |
| CN909 | AA37-00001A | CONNECTOR-FBT FIX PIN | JM-3500,CPTTV,0.36 | 1 | S.A | |
| T0077 | AA41-01180A | PCB MAIN | CL21Z30,FR-1,1,A,1.6,245*245*1. | 1 | S.N.A | |
| GT101 | BH71-40300A | PIN-HINGE | BRASS,D2.36!,HEAT/SINK,SN | 1 | S.N.A | |
| GT102 | BH71-40300A | PIN-HINGE | BRASS,D2.36!,HEAT/SINK,SN | 1 | S.N.A | |
| GT103 | BH71-40300A | PIN-HINGE | BRASS,D2.36!,HEAT/SINK,SN | 1 | S.N.A | |
| GT404 | BH71-40300A | PIN-HINGE | BRASS,D2.36!,HEAT/SINK,SN | 1 | S.N.A | |
| GT804 | BH71-40300A | PIN-HINGE | BRASS,D2.36!,HEAT/SINK,SN | 1 | S.N.A | |
| GT805 | BH71-40300A | PIN-HINGE | BRASS,D2.36!,HEAT/SINK,SN | 1 | S.N.A | |
| GT806 | BH71-40300A | PIN-HINGE | BRASS,D2.36!,HEAT/SINK,SN | 1 | S.N.A | |

| Loc.No. | Code No. | Description | Specification | Q'ty | SA/SNA | Remark |
|---|---|---|---|---|---|---|
| C826 | 2301-001194 | C-FILM,LEAD-PPF | 470nF,5%,250V,TP,18x16x8 | 1 | S.A | |
| R914 | 2001-000241 | R-CARBON | 1.5KOHM,5%,1/8W,AA,TP,1.8X3.2MM | 1 | S.A | |
| M0018 | AA97-16507A | ASSY MICOM | T-HITNSA-1000,K16B,HITCH NTSC | 1 | S.A | |
| T0119 | AA09-00508A | IC MICOM | TDA12005PQ/N1FCO-MTP,CL21M21EQ2 | 1 | S.A | |
| P803T | 1404-001265 | THERMISTOR-PTC | 4.5OHM/100OHM,+30/-20%,22 | 1 | S.A | |
| IC301 | BP96-00712B | ASSY HEAT SINK P | BP62-00063A,6003-000334 | 1 | S.N.A | |
| CIS1 | 0205-001154 | OIL-SILICON | G746,-,- | 0.1 | S.N.A | |
| T0088 | 1204-002183 | IC-VERTICAL PROCESSO | LA78045,TO220,7P,15 | 1 | S.A | |
| M0081 | 6003-000334 | SCREW-TAPTITE | RH,+,2S,M3,L6,ZPC(YEL),SWR | 1 | S.N.A | |
| T0175 | BP62-00063A | HEAT SINK-PS | CHAMP,A1050S,T2.0,42,100,WH | 1 | S.N.A | |

## ASSY FIXING

| | | | | | | |
|---|---|---|---|---|---|---|
| T0892 | AA91-09762E | ASSY FIXING | CL21Z30MQLXXAO,CP-2/NO,K16B, | 1 | S.N.A | |
| T0245 | AA39-20010D | LEAD CONNECTOR-ASSY | ,1P,400,YFH800-01,S, | 3 | S.A | |
| T0016 | AA65-30009A | CLAMPER CORE-FBT | -,ABS,V0,-,BLK,- | 1 | S.N.A | |
| CIS1 | AA65-30018A | CLAMPER CORE-WIRE | DONG-A,NYLON-66,-,-,- | 2 | S.N.A | |
| ⚠ T0066 | AA96-20109J | ASSY POWER CORD | -,CP2/NO(4.0),H/S 200MM, | 1 | S.A | |
| T0061 | 3811-001609 | WIRE-PVC CU | BCWA,300V,ROLL,-,#22,BLK | 0.15 | S.N.A | |
| T0268 | AA39-10006X | CBF-POWER CORD | -,-,KKP419C,3P,-,-,BLK,- | 1 | S.A | |
| T0010 | AA61-20284A | HOLDER | P-CORD,PP,-,-,-,BLK,VO,KE-002 | 1 | S.N.A | |
| CIS1 | AA65-30110A | CLAMPER CORE-WIRE | ALL MODEL,NYLON 66,V2, | 1 | S.N.A | |

## ASSY CPT

| | | | | | | |
|---|---|---|---|---|---|---|
| T0521 | AA91-09800C | ASSY CPT | 21,A51QGD991X001,+380MG,SDI FL | 1 | S.N.A | |
| ⚠ T0063 | AA03-00467A | CRT COLOR | A51QGD991X001,+380,0.96,12.6,1 | 1 | S.A | |
| T0089 | AA27-00362A | COIL DEGAUSSING | YE-050926,CPPTV,4.41mh,5 | 1 | S.A | |
| T0527 | AA65-30107A | CLAMPER CORE-D,COIL | 20~22 INCH,NYLON 66, | 4 | S.A | |
| T0603 | AA96-03893A | ASSY TBC WIRE P | Vixlim,21,PAL,NTSC,2P | 1 | S.N.A | |

## ASSY ACCESSORY

| | | | | | | |
|---|---|---|---|---|---|---|
| M0045 | AA92-11486E | ASSY ACCESSORY | CL21Z30MQLXXAO,K16B,HITCH | 1 | S.N.A | |
| M0045 | AA96-03912A | ASSY ACCESSORY | CL21Z30MQLXXAO,K16B,HITCH | 1 | S.N.A | |
| T0251 | 3721-000136 | PLUG-CONVERSION | 2P,4.0mm,N,NI | 1 | S.A | |
| T0524 | 6902-000009 | BAG PE | HDPE,T0.03,L400,W240,TRP,8,2,PE M | 1 | S.N.A | |
| T0903 | AA26-90001F | TRANS MATCHING | -,300ohm/75ohm,NTSC,40-89 | 1 | S.A | |
| T0116 | AA39-40001B | CABLE RCA | ,3P,1500MM,RED/WHT/YEL,RCA,RCA | 1 | S.A | |
| T0075 | AA42-00003A | ANT ROD | -,3S,720mm,ABS,UL/CSA,- | 1 | S.A | |
| T0074 | AA59-00316D | REMOCON | TM75,ET,30,G6148A,NT,EX | 1 | S.A | |
| 0 | AA68-03242F | MANUAL FLYER-01,SAFETY GUIDE | All Model,S | 1 | S.N.A | |
| T0238 | AA68-03727A | MANUAL FLYER-WARRANTY CARD | All,SAMSUNG,S | 1 | S.N.A | |
| M0596 | AA68-03750A | MANUAL USERS-00 | COMM,SEM,SPA,S/AMERICA,W | 1 | S.N.A | |
| M0596 | AA68-03751A | MANUAL USERS-00 | COMM,SEM,ENG,S/AMERICA,W | 1 | S.N.A | |

## ASSY BOX

| | | | | | | |
|---|---|---|---|---|---|---|
| M0003 | AA92-11494D | ASSY BOX | CL21Z30MQLXXAO | 1 | S.N.A | |
| T0130 | AA69-03238B | BOX-00,SET | 21Z30(OVERSEA),DY-04,AB,YEL,A | 1.01 | S.N.A | |

## ASSY P/MATERIAL

| | | | | | | |
|---|---|---|---|---|---|---|
| M0113 | AA92-11495A | ASSY P/MATERIAL | 21Z30 | 1 | S.N.A | |
| T0376 | 6902-000001 | BAG AIR | LDPE,T0.2,L1800,W1000,TRP,,,LDPE | 0.007 | S.N.A | |
| T0524 | 6902-000005 | BAG PE | HDPE/NITRON/HDPE,T0.015/T0.5/T0.0 | 1 | S.N.A | |
| T0376 | 6902-000061 | BAG AIR | LDPE,T0.2,L1000,W500,TRP,,, | 0.03 | S.N.A | |
| T0214 | AA60-40006A | PIN-STAPLE | AUTO,33X17.8X2.4,H18,33X17.8X | 6 | S.N.A | |

## ASSY COVER FRONT

| | | | | | | |
|---|---|---|---|---|---|---|
| M0001 | AA90-05457D | ASSY COVER FRONT | CL21Z30MQLXXAO | 1 | S.N.A | |
| M0081 | 6003-001026 | SCREW-TAPTITE | RH,+,B,M4,L15,ZPC(BLK),SWR | 5 | S.A | |
| M0081 | 6003-001026 | SCREW-TAPTITE | RH,+,B,M4,L15,ZPC(BLK),SWR | 2 | S.A | |
| M0081 | 6003-001268 | SCREW-TAPTITE | TH,+,B,M4,L12,ZPC(YEL),SWR | 1 | S.N.A | |
| CCM1 | AA60-10050R | SCREW-MACHINE | -,SWRCH18A,M5,L31.5,HH,+,W | 4 | S.A | |
| T0003 | AA96-03933B | ASSY COVER P-FRONT | 21Z30,HIPS,HB,GR503,B | 1 | S.A | |

| Loc.No. | Code No. | Description | Specification | Q'ty | SA/SNA | Remark |
|---|---|---|---|---|---|---|
| M0081 | 6003-001019 | SCREW-TAPTITE | RH,+,-,B,M4,L12,ZPC(BLK),S | 1 | S.A | |
| M0081 | 6003-001019 | SCREW-TAPTITE | RH,+,-,B,M4,L12,ZPC(BLK),S | 1 | S.A | |
| T0069 | AA60-00091J | SPACER-FELT | -,FELT,330X10,-,-,BLK,T0.5,- | 1 | S.N.A | |
| M0081 | AA60-10002A | SCREW-TAPTITE | RH,+,-,-,M4,L12,ZPC(YEL),S | 4 | S.N.A | |
| T0607 | AA61-40113A | STOPPER-PCB | 501H,HIPS,-,-,HB,NTR,- | 1 | S.A | |
| CIS7 | AA61-60003J | SPRING ETC-CS | -,SUS304,-,-,OD6,N7,OD6,-, | 1 | S.N.A | |
| M0112 | AA63-01287A | COVER-FRONT | 21Z30(SAMEX),HIPS,HB,GR503,S | 1 | S.N.A | |
| T0750 | AA63-01305A | COVER-MASK | 21Z30(SAMEX),HIPS,HB,GR503,BK | 1 | S.N.A | |
| T0023 | AA64-04309A | KNOB POWER | 21Z30,ABS,HB,SILVER,SVM3012 | 1 | S.N.A | |
| T0022 | AA64-04310A | KNOB CONTROL | 21Z30,ABS,HB,SILVER,SVM3012 | 1 | S.N.A | |
| T0054 | AA64-04311A | KNOB-DECORATION | 21Z30,ABS,HB,SILVER,SVM3 | 1 | S.N.A | |
| T0299 | AA64-04312A | WINDOW-RMC LED | 21Z30,PC,CLEAR | 1 | S.N.A | |
| T0057 | AA64-70123A | BADGE-BRAND | NEW,AL,L50,FLAT,SILVER,SAMSU | 1 | S.A | |
| CIS1 | AA65-00011C | CLAMPER CORE-WIRE | ALL MODEL,NYLON 66,V2, | 1 | S.N.A | |
| T0175 | AA96-03164A | ASSY SPEAKER P | 8ohm,6*13cm,Z31,10W,SPK+W | 1 | S.A | |
| T0382 | BP61-00509C | HOLDER-CARE | PJT,ACRYL-FOAM,T0.25,W20.0mm | 0.28 | S.N.A | |
| M0081 | 6003-001268 | SCREW-TAPTITE | TH,+,B,M4,L12,ZPC(YEL),SWR | 10 | S.N.A | |
| T0382 | BP61-00495C | HOLDER-CARE | PJT,ACRYL-FOAM,T0.25,W30.0mm | 0.2 | S.N.A | |

## ASSY COVER REAR

| | | | | | | |
|---|---|---|---|---|---|---|
| M0002 | AA90-05458B | ASSY COVER REAR | 21Z30,HIPS,HB,BK500,K16B | 1 | S.N.A | |
| T0069 | AA60-00091J | SPACER-FELT | -,FELT,330X10,-,-,BLK,T0.5,- | 3 | S.N.A | |
| M0006 | AA63-01288A | COVER-REAR | 21Z30(SAMEX),HIPS,HB,BK500,S/ | 1 | S.A | |
| T0578 | AA64-03660Z | INLAY AV | 21Z30(NT),PS,T0.3,BLK,SHEET,K16 | 1 | S.N.A | |
| T0066 | AA64-03974K | INLAY-BACK | K16A(XAZ),PS,SHEET,T0.3,BLK,R | 1 | S.N.A | |
| T0522 | AA65-30008A | CLAMPER CORE-CORD | -,PE,HB,-,BLK,- | 1 | S.N.A | |

# 6. Troubleshooting

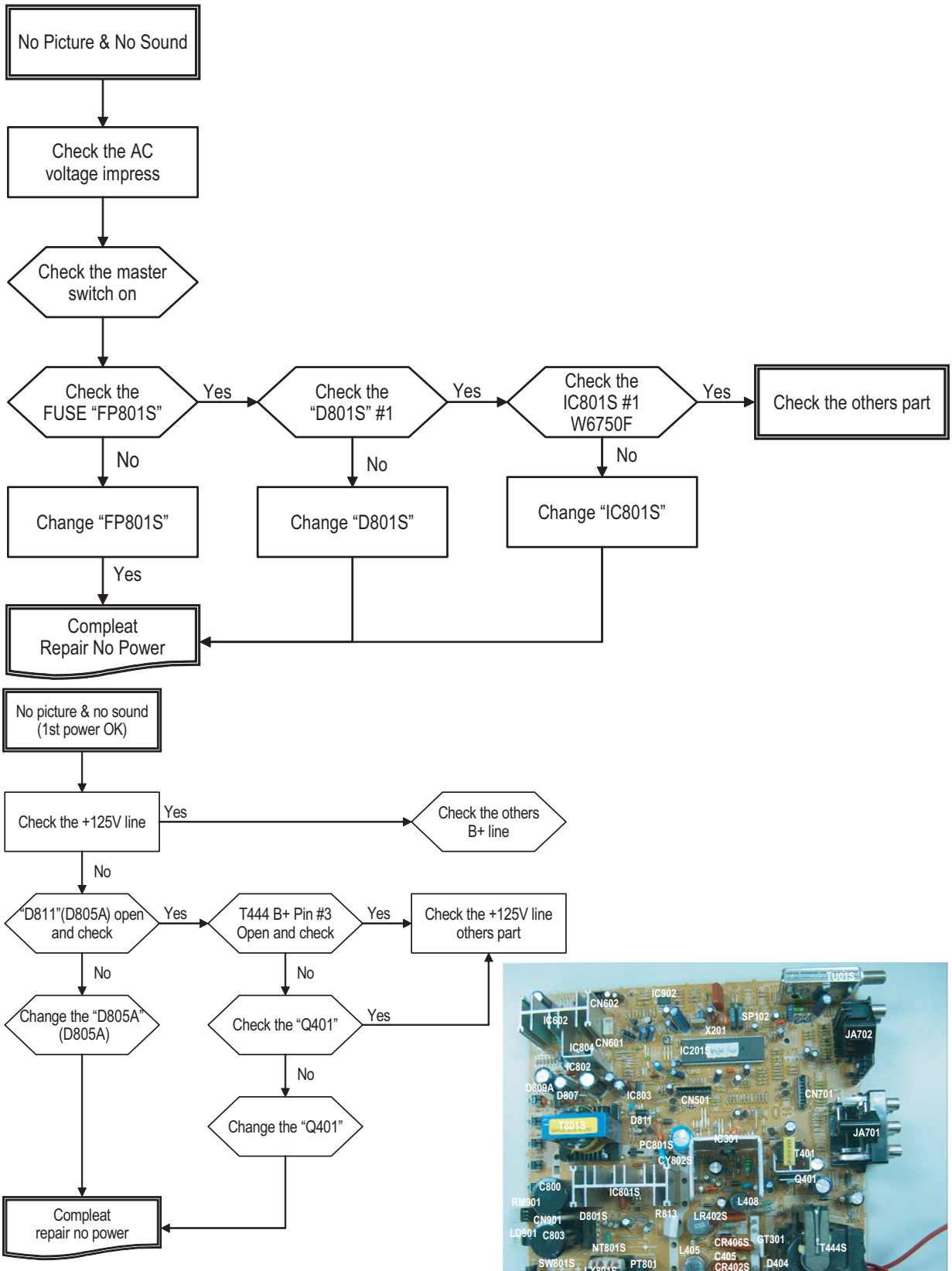
## 6-1 Checkpoints by Error Mode

■ Power LED: Check that the LED works when turning the Master Switch ON/OFF

■ LED Indicators: See table 6-2-1 Basic Troubleshooting: LED Diagnosis on the Front Panel.

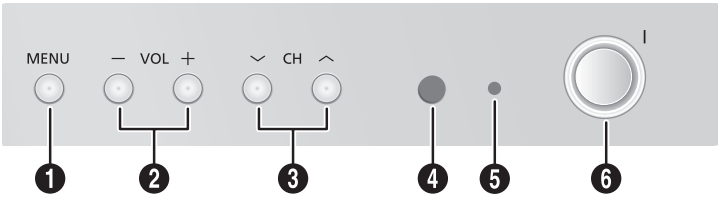
■ In case of a power failure or abnormal screen, check the following items.
1) Check that the power cord is correctly connected to a 230V wall outlet.
2) Check that the Master Switch has been pressed.
3) Check that the transmitter is turned on.
4) Check that transmitter device selection is set to TV.
5) Check that the signal cable is properly connected.
6) Check that channel setting has been set.

## 6-1-1 Flow Chart for Malfunction



# 6-2 Troubleshooting Procedures by Error Modes

## 6-2-1 Basic Troubleshooting: Diagnosis of LED on the Front Panel




● : Light is On
◑ : Light is Blinking
○ : Light is Off

| Power | Description |
|---|---|
| ○ | This happens when the Master Switch is not pressed or the power cord is disconnected. |
| ● | This happens when the power cord is connected and the power switch is pressed.<br>If you cannot set the power switch on by pressing it, check the power switch Ass'y. |
| ○→◑→● | If you press the power switch of the transmitter or the channel key on the remote control when in St-BY status, the screen will be turned on.<br>If the LED blinks and the screen is not displayed, check the connection between the Control Assy and the Main Board. |

## 6-2-2 Troubleshooting by the Checksum

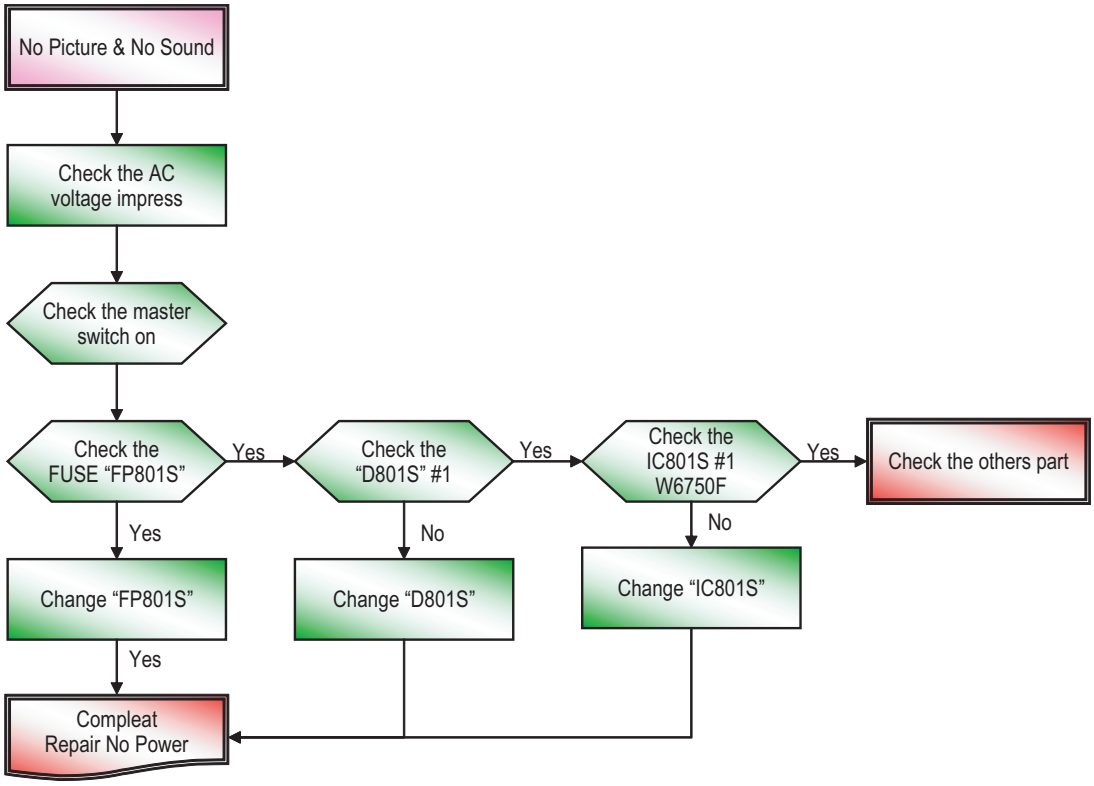
■ Diagnosis of trouble by the checksum is neither reliable nor convenient.
You can only use the checksume of the current direct-view TV to determine whether the software is corrupted or not.
The Checksum value is determined according to the version of the software loaded on the set.
Therefore, you can determine whether the software has been properly downloaded, if you know the correct checksum for that version of the software.

You can check the checksum according in the following order.
Factory Mode → Checksum → Right Button → Calculate Checksum → Output Checksum (e.g. 3036)

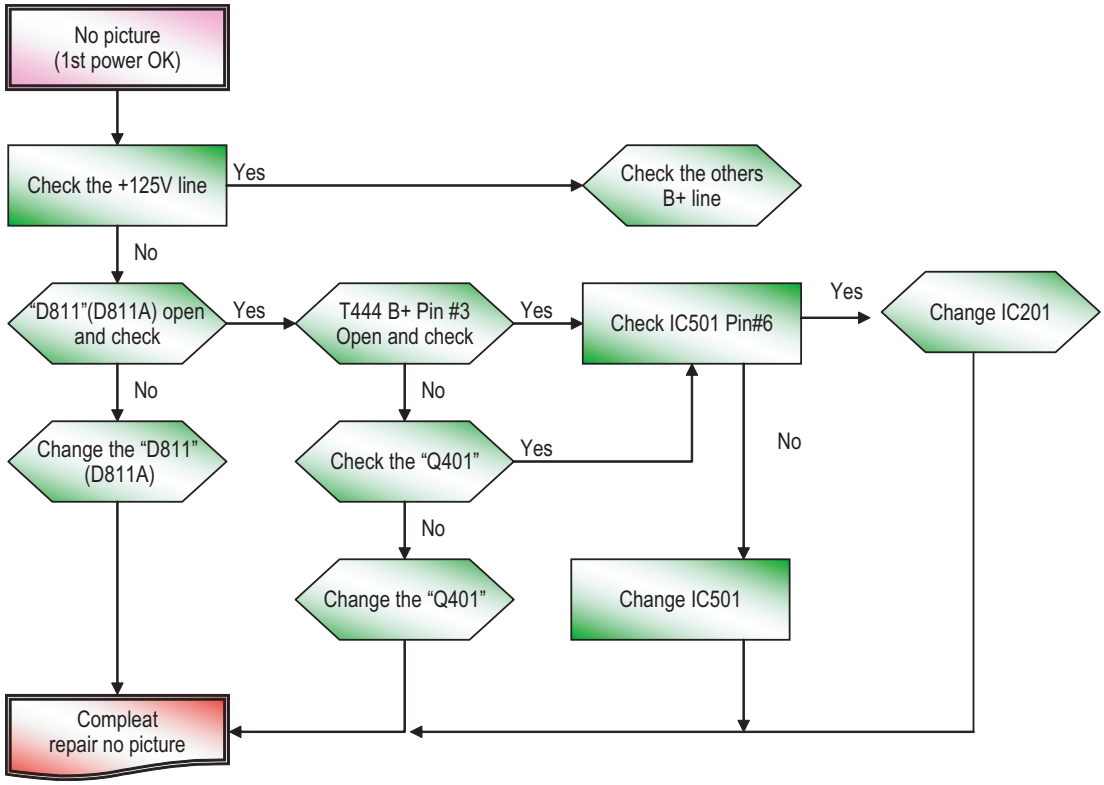
■ Checksum Examples
T-HITNSA-1000:checksum = 4964

# 6-3 Troubleshooting Procedures by ASS'Y

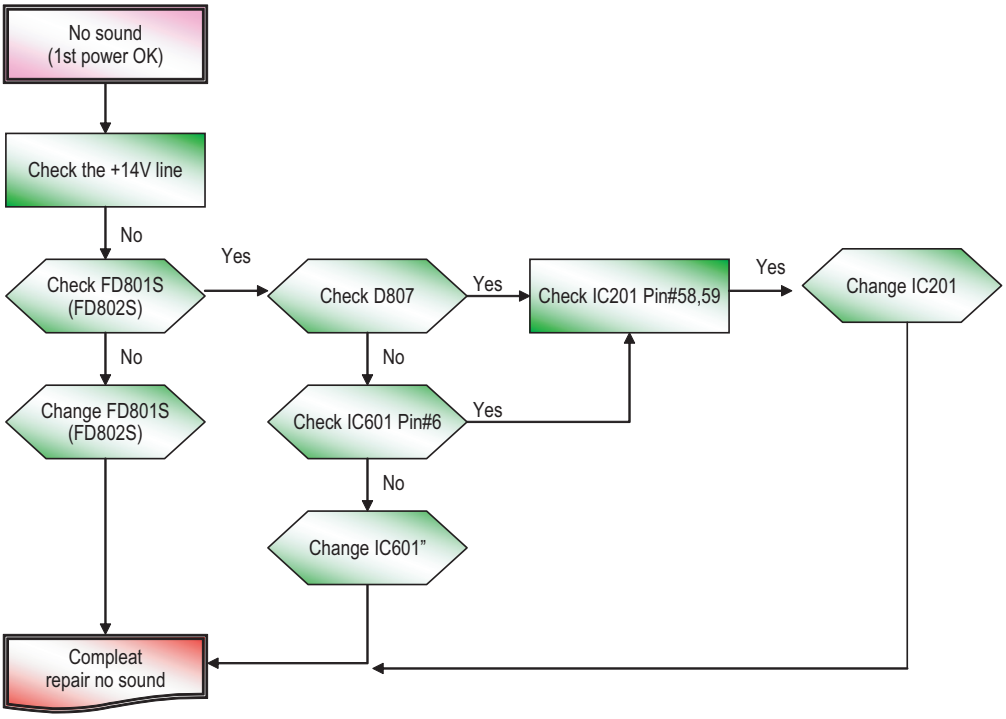
## 6-3-1 No Power (1st Power)

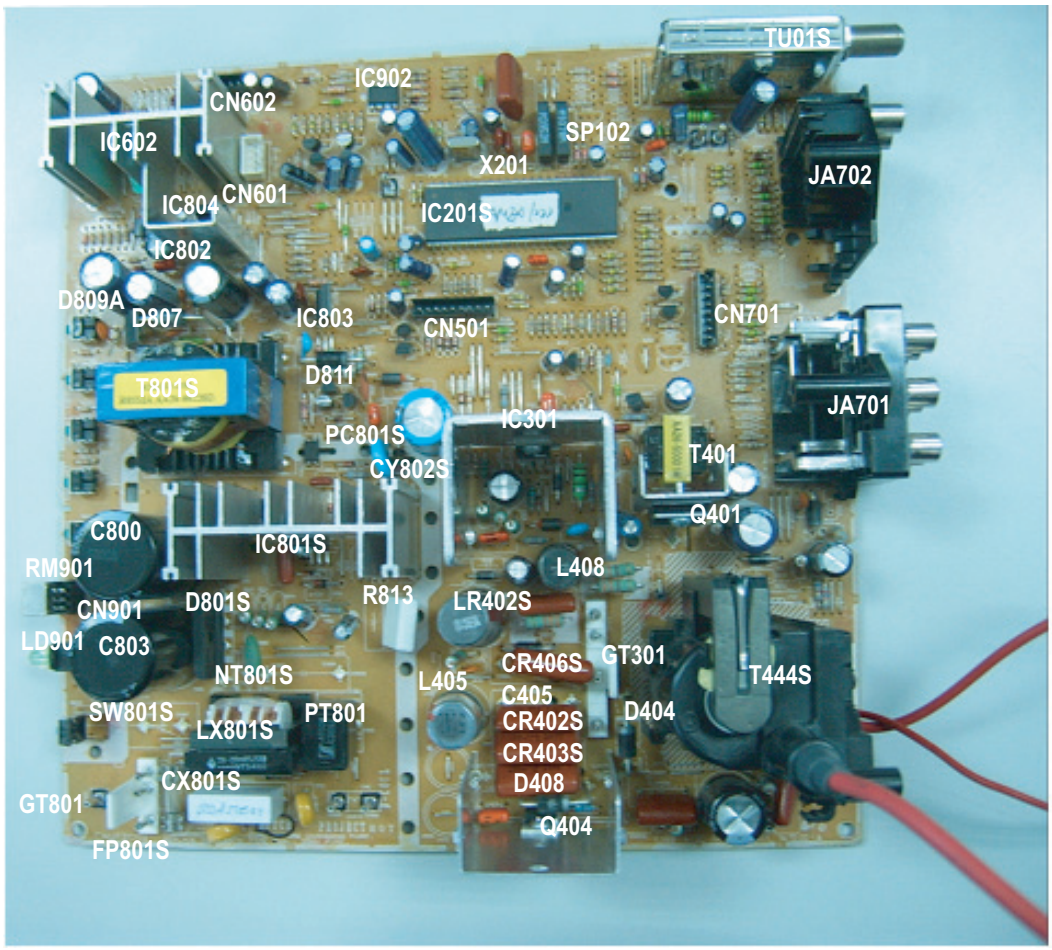



## 6-3-2 No Picture(2nd Power)



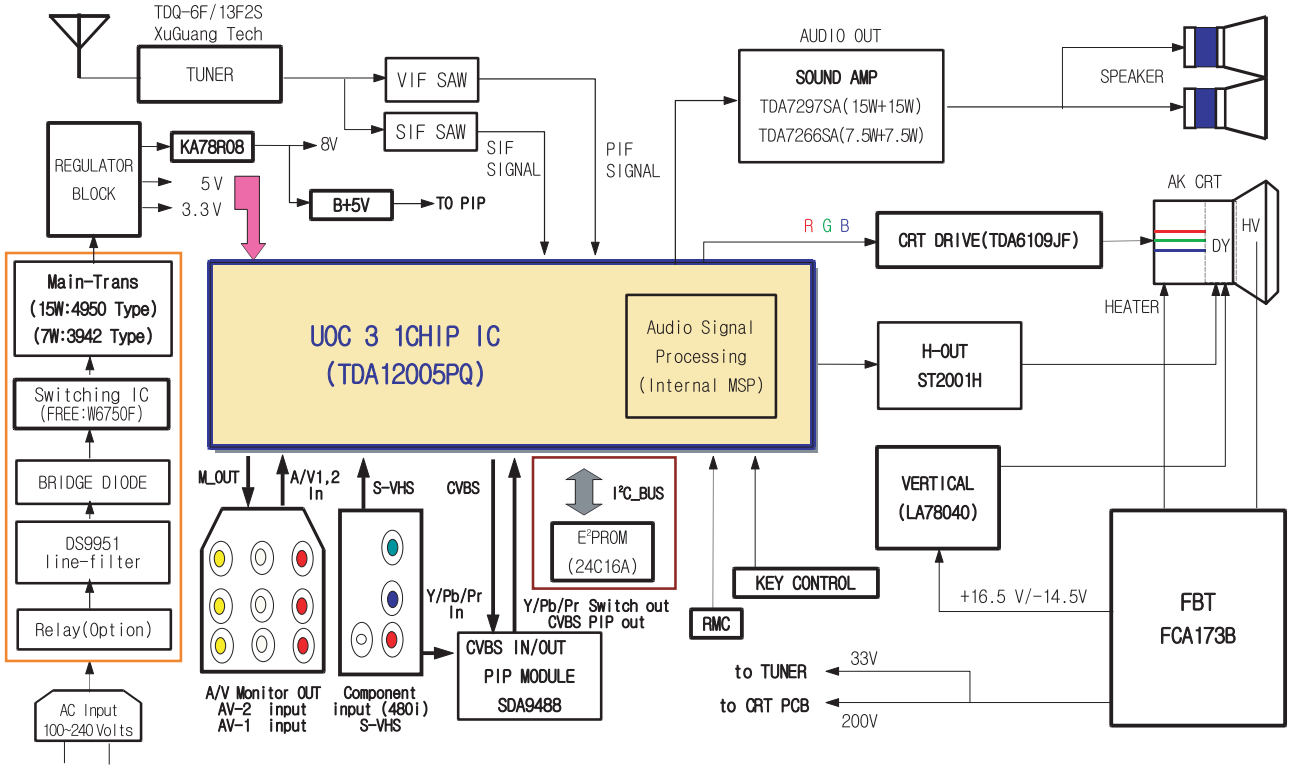
## 6-3-3 No Sound


No sound
(1st power OK)
Check the +14V line
No
Check FD801S
(FD802S)
Yes
Check D807
Yes
Check IC201 Pin#58,59
Yes
Change IC201
No
Change FD801S
(FD802S)
No
Check IC601 Pin#6
Yes
No
Change IC601"
Compleat
repair no sound


TU01S
IC902
CN602
IC602
SP102
X201
JA702
IC804
CN601
IC201S
IC802
D809A
D807
IC803
CN501
CN701
T801S
D811
JA701
IC301
PC801S
CY802S
T401
Q401
C800
IC801S
RM901
L408
CN901
D801S
R813
LR402S
LD901
C803
GT301
CR406S
T444S
NT801S
L405
C405
SW801S
PT801
D404
LX801S
CR402S
CR403S
CX801S
D408
GT801
Q404
FP801S

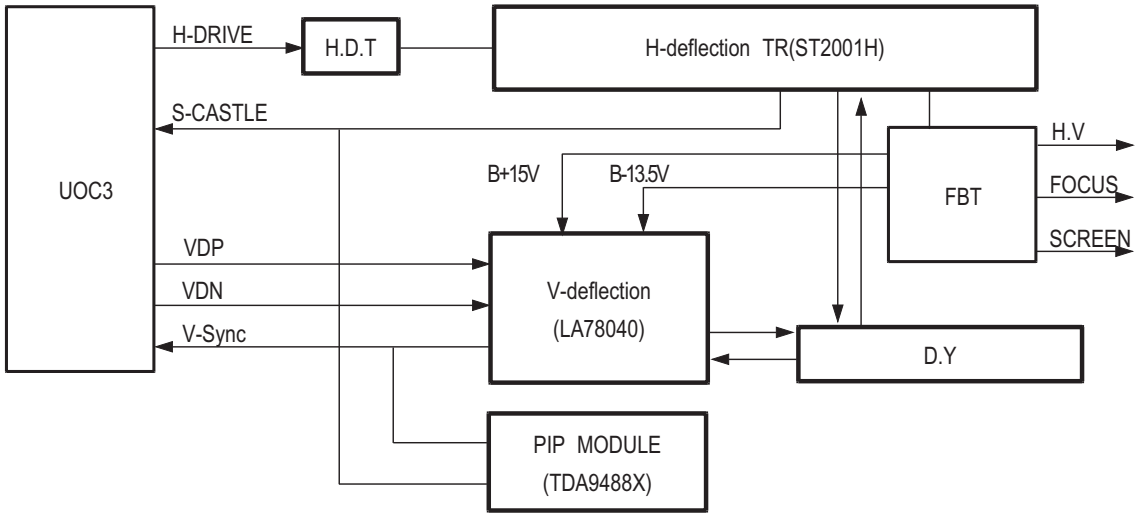
# 7. Block Diagram

## 7-1 Overall Block Diagram

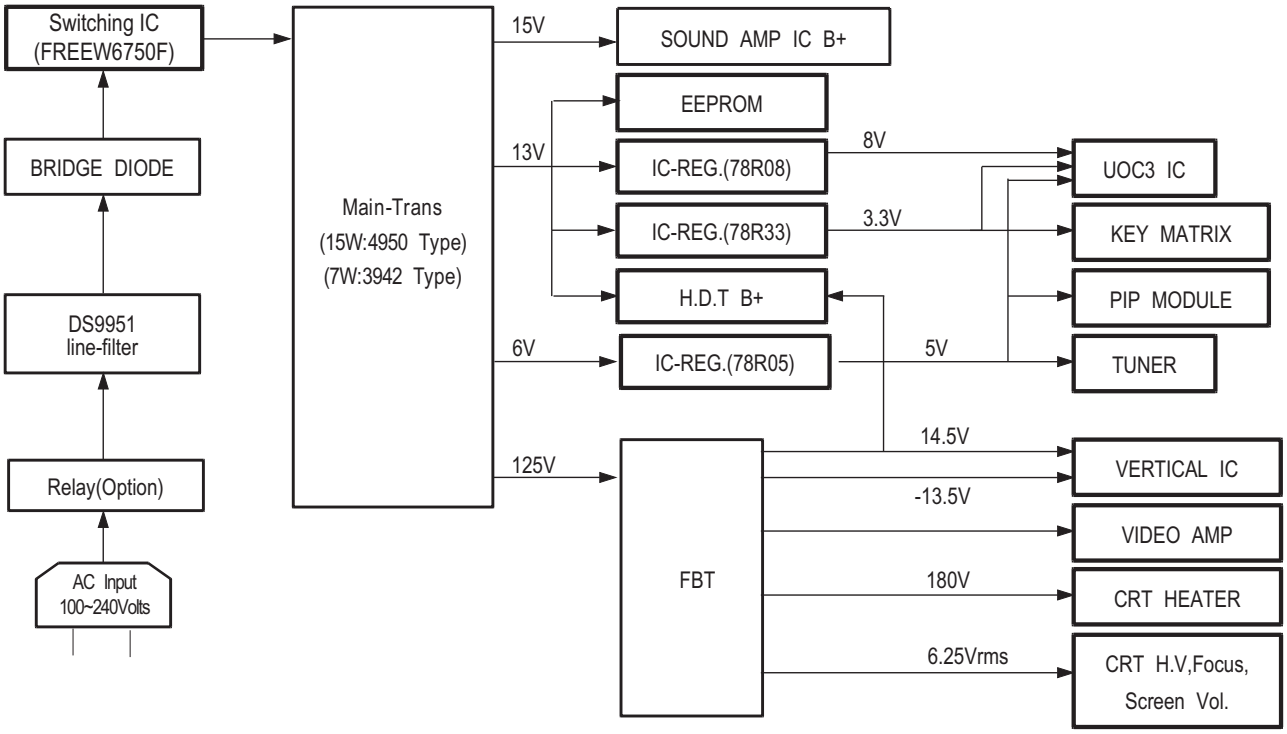


# 7-2 Partial Block Diagram

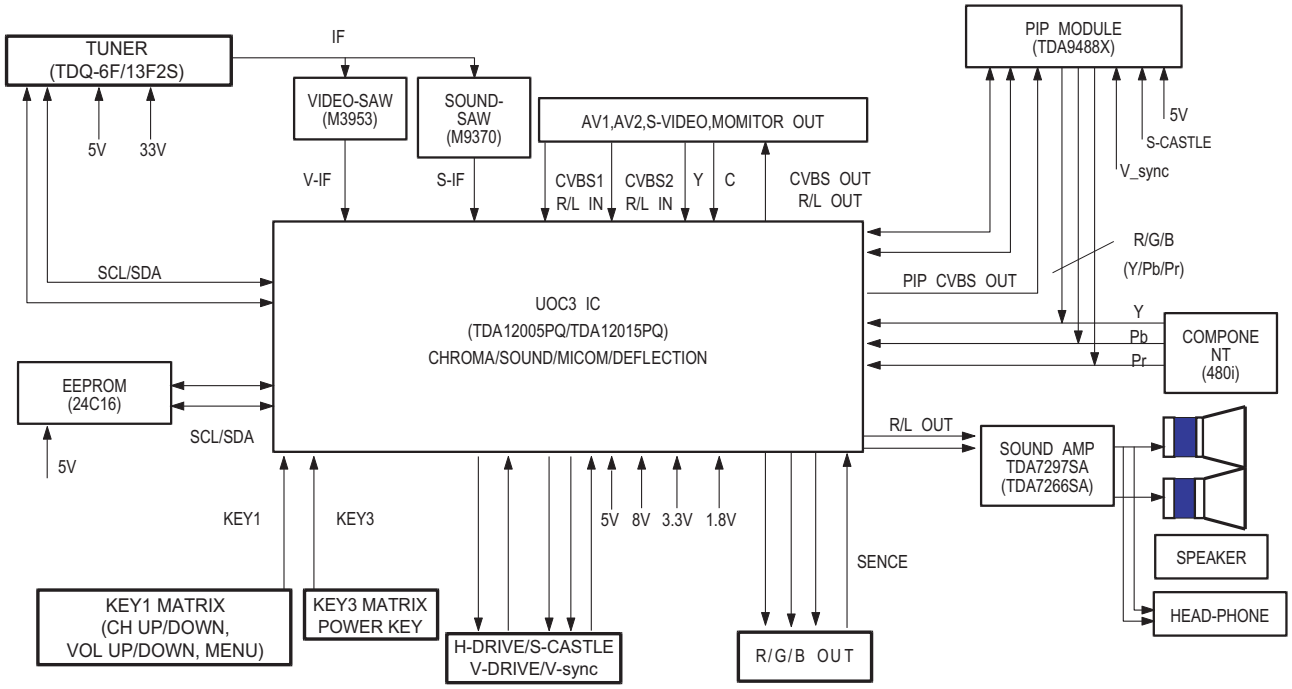
## 7-2-1 Deflection Block Diagram



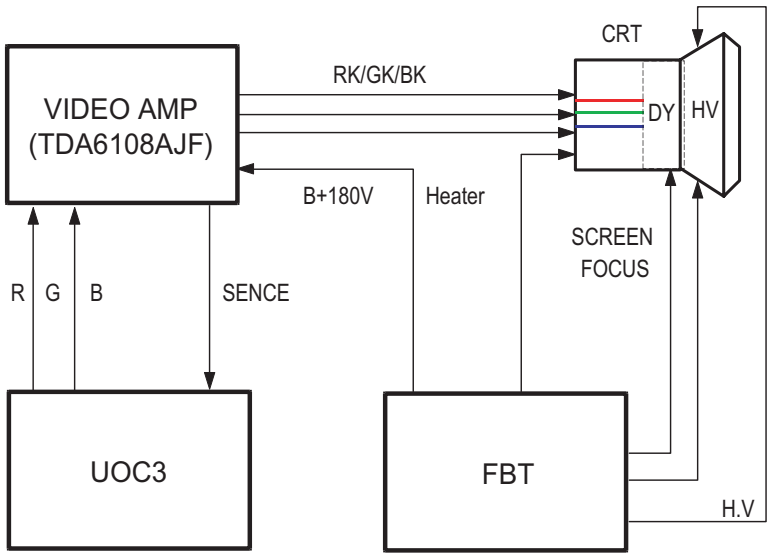

## 7-2-2 Power Block Diagram



## 7-2-3 Micom & Tuner Block Diagram

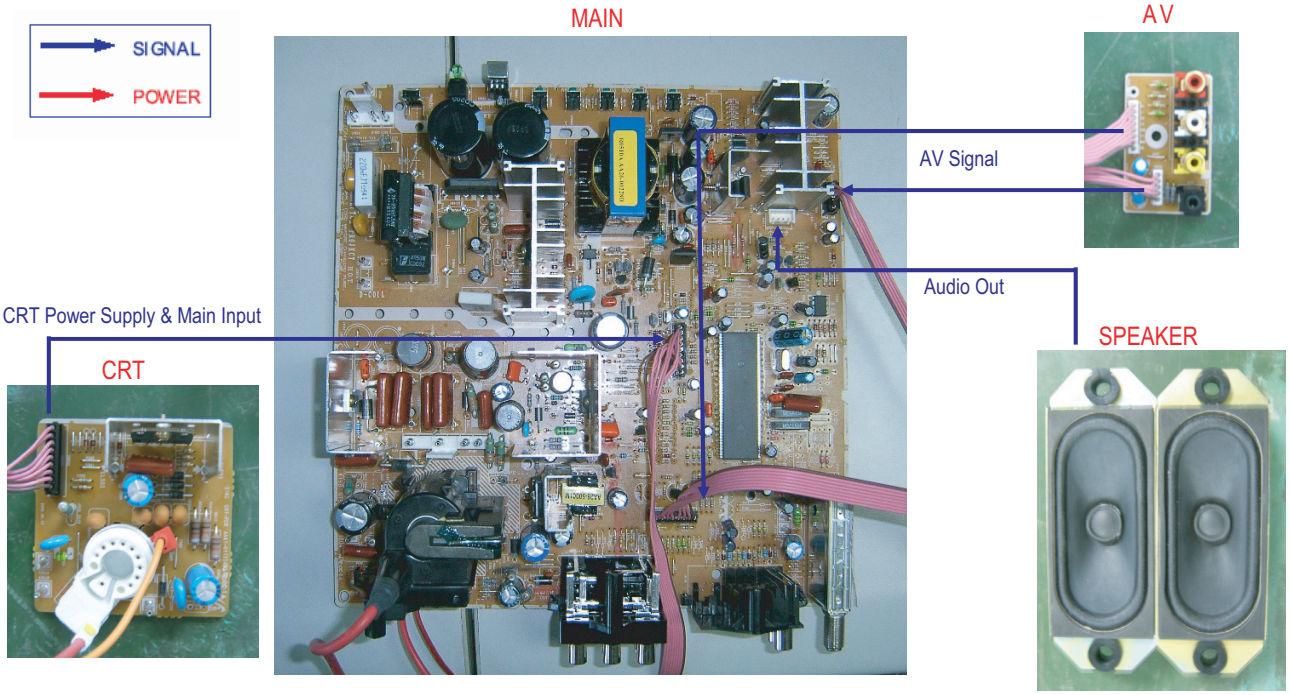



## 7-2-4 CRT Drive Block Diagram

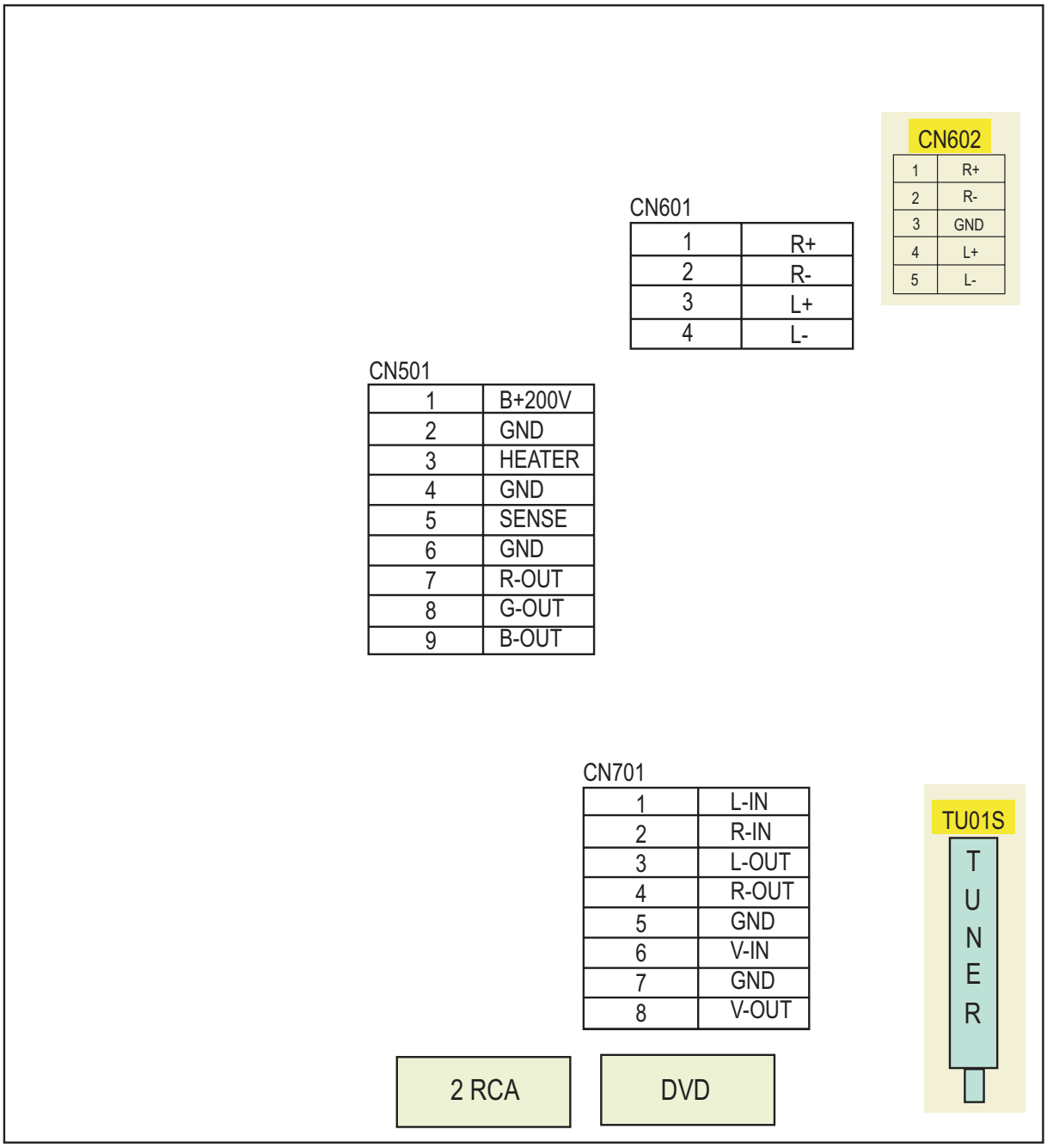


# 8. Wiring Diagram

## 8-1 Overall Wiring



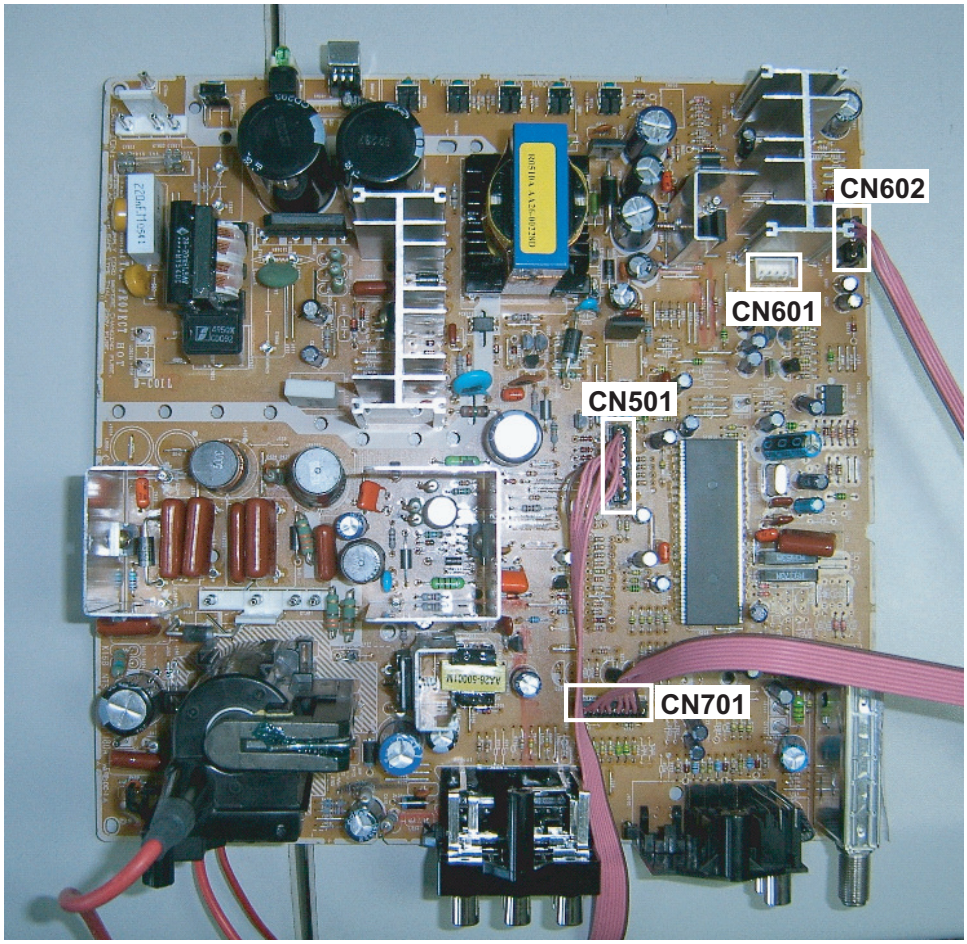
## 8-2 Pin Connection



# 9. PCB Diagram

## 9-1 Main Board

### 9-1-1 Assy Main Board




■ The Board that Controls Various Signals & Power for Product Operations

### 9-1-2 Names & Roles of Key Parts

* CN601 : A 4 pin port connected to the SPEAKER port, which delivers the signal from the AMP to the speakers.
* CN602 : A 5 pin port connected to the AV ASSY, which delivers the signal to the headphone.
* CN501 : A 9 pin port connected to the CRT ASSY, which outputs the R/G/B signal to the CRT ASS'Y for display and Power signals to the CRT DRIVE.
* CN701 : A 8 pin port connected to the AV ASSY, which receives AV2 external input.

## 9-1-3 Main Board Connector Pin

CN601
Connected to the Speaker

| PIN No. | Pin Name |
|---|---|
| 1 | R+ |
| 2 | R- |
| 3 | L+ |
| 4 | L- |

CN602
Connected to the AV ASS'y

| PIN No. | Pin Name |
|---|---|
| 1 | R+ |
| 2 | R- |
| 3 | GND |
| 4 | L- |
| 5 | L+ |

CN501
Connected to the CRT ASS'y

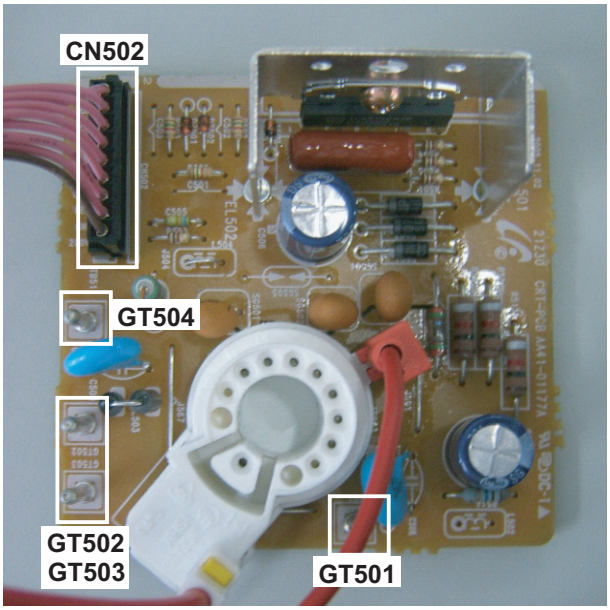
| PIN No. | Pin Name |
|---|---|
| 1 | B+200V |
| 2 | GND |
| 3 | HEATER |
| 4 | GND |
| 5 | SENSE |
| 6 | GND |
| 7 | R-OUT |
| 8 | G-OUT |
| 9 | B-OUT |

CN701
Connected to the AV Ass'y

| PIN No. | Pin Name |
|---|---|
| 1 | L-IN |
| 2 | R-IN |
| 3 | L-OUT |
| 4 | R-OUT |
| 5 | GND |
| 6 | V-IN |
| 7 | GND |
| 8 | V-OUT |

# 9-2 CRT Board

## 9-2-1 Assy CRT Board




■ Through this port, the power from the DEFLECTION BLOCK & the R/G/B output signal from the UOC Module are supplied to drive the CRT and AMP.

## 9-2-2 Names & Roles of Key Parts

* GT502 & GT503 : The TBC-WIRE connection port. This port plays the role of the CRT GROUND.
* CN502 : The R/G/B output signal from the UOC Module & the power, which is required to drive the CRT and the AMP, from the DEFLECTION BLOCK is connected to this port.

## 9-2-3 CRT Board Connector Pin

CN502
Connects the R/G/B signal from the UOC Module.

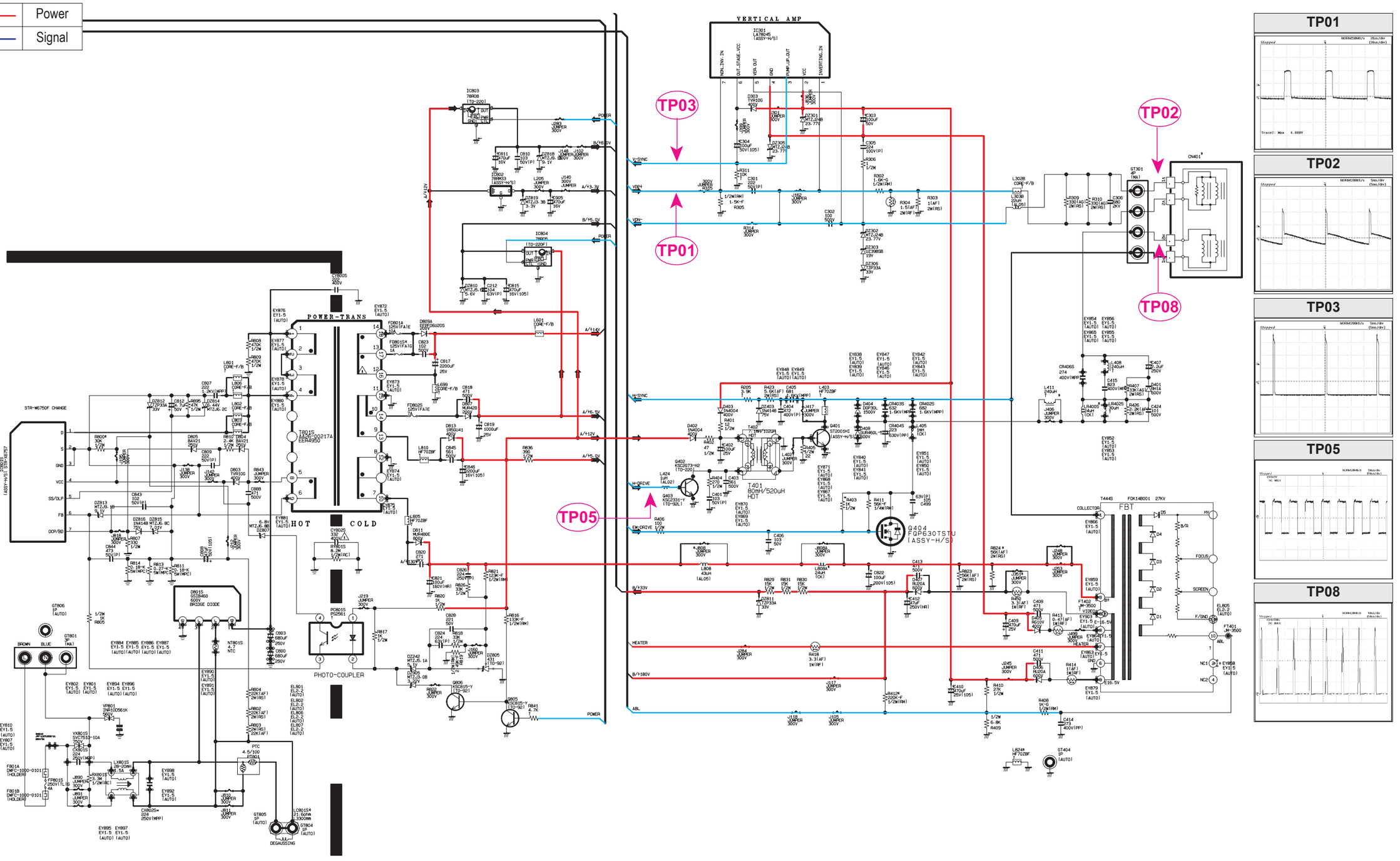
| PIN No. | Pin NAME |
|---|---|
| 1 | B+200V |
| 2 | GND |
| 3 | HEATER |
| 4 | GND |
| 5 | SENSE |
| 6 | GND |
| 7 | R-OUT |
| 8 | G-OUT |
| 9 | B-OUT |

# 10. Schematic Diagram

## 10-1 Power Block

This Document can not be used without Samsung's authorization.

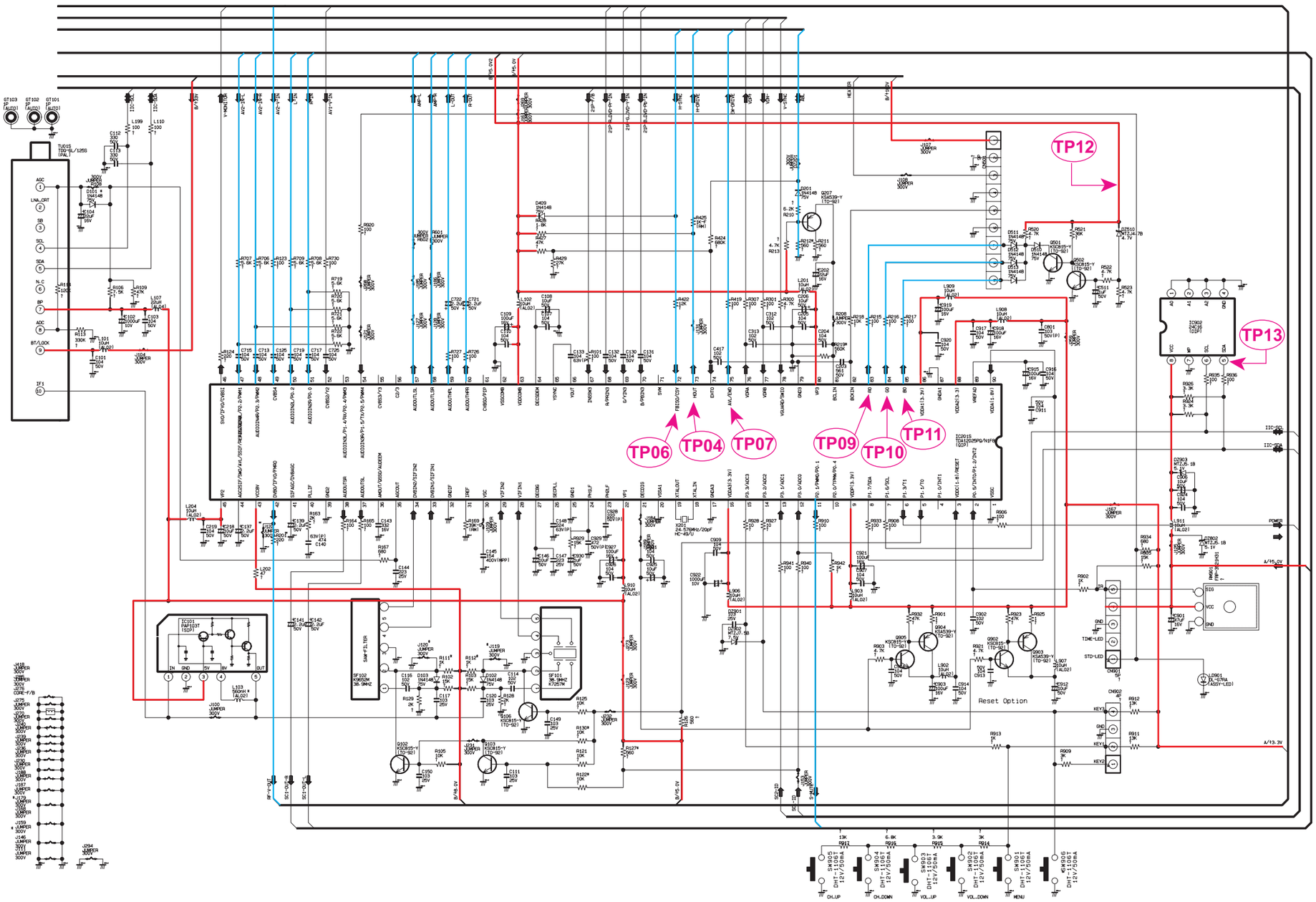
| | |
|---|---|
| ——— | Power |
| ——— | Signal |



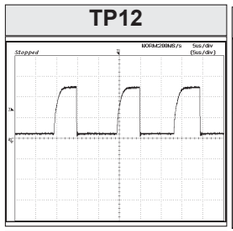
# 10-2 Main Block

This Document can not be used without Samsung's authorization.

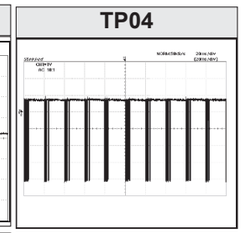
| | |
|---|---|
| ——— | Power |
| ——— | Signal |



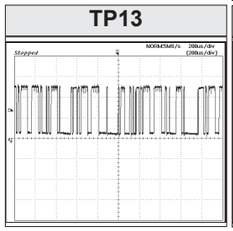

TP12



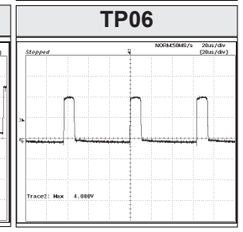
TP04



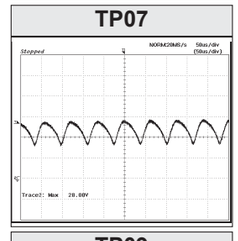
TP13



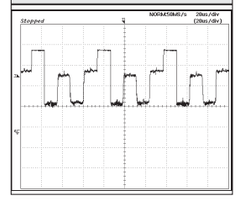
TP06



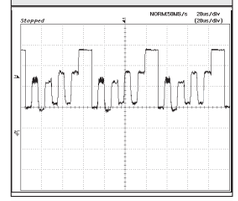
TP07



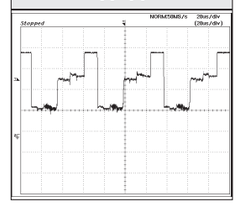
TP09



TP10



TP11



# 10-3 CRT Block

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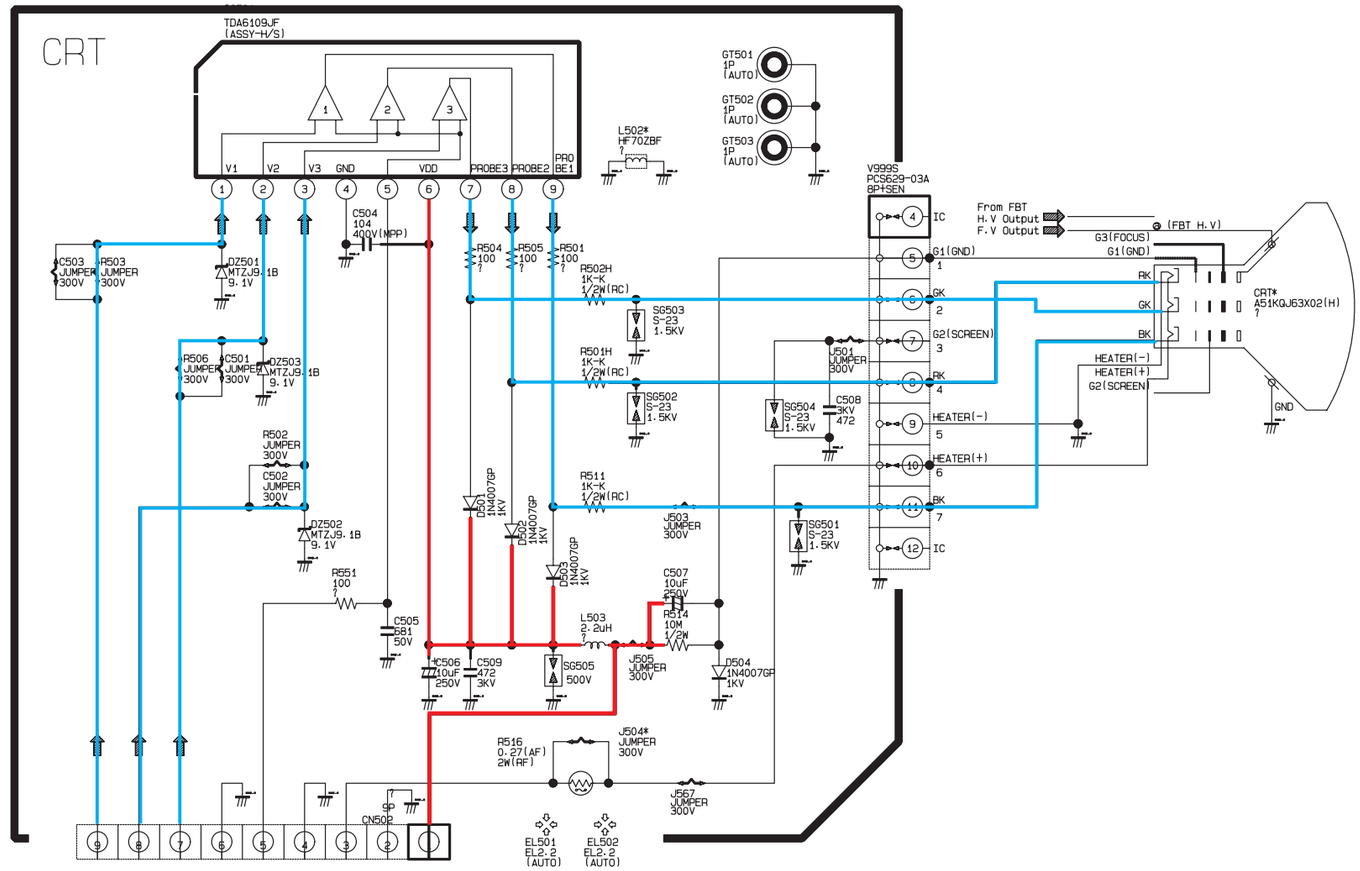
| | |
|---|---|
| ——— | Power |
| ——— | Signal |



# 10-4 Sound Block

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